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No. [redacted] 95

IN THE

SUPREME COURT OF THE UNITED STATES.

OCTOBER TERM, A. D. 1914.

THE RAILROAD SUPPLY COMPANY,
Petitioner,

vs.

ELYRIA IRON & STEEL COMPANY,
Respondent.

Petition for a Writ of Prohibition to the United States District Court for the Eastern Division of the Northern District of Ohio and for a Writ of Certiorari to the United States Circuit Court of Appeals for the Sixth Circuit.

Petition for Writ of Prohibition and of Certiorari.

TAYLOR E. BROWN,
CHARLES C. LINTHICUM,
CLARENCE E. MEHLHOPE,
COUNSEL FOR PETITIONER.

BARNARD & MILLER PRINT, CHICAGO.

IN THE

SUPREME COURT OF THE UNITED STATES.

OCTOBER TERM, A. D. 1914.

THE RAILROAD SUPPLY COMPANY, *Petitioner,* vs. THE ELYRIA IRON & STEEL COMPANY, *Respondent.*	Petition for a Writ of Prohibition to the United States District Court for the Eastern Division of the Northern District of Ohio and for a Writ of Certiorari to the United States Circuit Court of Appeals for the Sixth Circuit.

PETITION FOR WRITS OF PROHIBITION AND OF CERTIORARI.

To the Honorable the Chief Justice and the Associate Justices of the Supreme Court of the United States:

The Railroad Supply Company, your petitioner, respectfully represents and shows unto your Honors as follows:

I. That on the ninth day of December, 1908, your petitioner filed its bill of complaint against The Elyria Iron and Steel Company, respondent herein, in the Circuit (now District) Court of the United States for the Eastern Division of the Northern District of Ohio (said cause being designated "in Equity No. (7668) 26,") alleging the infringement of Letters Patent No. 538,809, dated May 7, 1895, No. 691,332 dated May 14, 1902, and No. 721,644, dated February 24, 1903, each issued to the inventor,

Benjamin Wolhaupter, for improvements in Tie Plates; and after issue joined, testimony taken and hearing upon pleadings and proofs by the court, Hon. W. L. Day, District Judge, presiding, a decree was entered on the fourth day of March, 1912, dismissing said bill of complaint for want of equity.

II. Your petitioner further shows that an appeal was granted and prosecuted in said cause to the United States Circuit Court of Appeals for the Sixth Circuit, Docket No. 2322; that on the 7th day of April, 1914, said Circuit Court of Appeals filed an opinion holding each of said Wolhaupter Letters Patent invalid, and if not invalid, then not infringed, and entered an order affirming the said decree of the District Court; that on the 30th day of June, 1914, the said Circuit Court of Appeals denied a petition for a rehearing of said cause, and in due course issued its mandate directing the affirmance of said decree of dismissal; that on the 20th day of July, 1914, said mandate was duly filed in and an order duly entered by said District Court, providing that the judgment of the said Circuit Court of Appeals be entered as the judgment of the said District Court and that the defendant recover its costs to be taxed; but your petitioner shows that the costs in said cause have not been adjusted, taxed nor settled, and that said cause is still pending in said District Court.

III. Your petitioner further shows that on the 11th day of December, 1908, it filed its Bill of Complaint in the Circuit (now District) Court of the United States for the Eastern Division of the Northern District of Illinois, against The Hart Steel

Company and Guilford S. Wood, as defendants (designated "in Equity No. 29,294)," alleging infringement of the same three Letters Patent for improvements in Tie Plates, granted to Benjamin Wolhaupter on which the suit last aforesaid was brought against The Elyria Iron&Steel Company in the Sixth Circuit; that after issue joined, testimony taken and hearing upon pleadings and proofs by the court, Hon. C. C. Kohlsaat, Circuit Judge, presiding, a decree was entered on the 28th day of December, 1911, dismissing the bill of complaint for want of equity; that upon an appeal from said decree, the United States Circuit Court of Appeals for the Seventh Circuit, Docket No. 1886, filed an opinion on the 5th day of January, 1915, holding each of said Letters Patent to be valid and also infringed, and on the date last aforesaid, an order or decree was entered in said cause No. 1886, reversing the said decree appealed from and directing further proceedings in conformity with the said opinion of the said Circuit Court of Appeals.

IV. Your petitioner further shows that on the 8th day of March, 1915, the said The Hart Steel Company and Guilford S. Wood, filed their petition in this court for a Writ of Certiorari based, in part, upon the divergence between the opinion and decision of the Circuit Court of Appeals for the Sixth Circuit in the said suit against The Elyria Iron & Steel Company, No. 2322, and the opinion and decision of the Circuit Court of Appeals for the Seventh Circuit, in the said suit against said The Hart Steel Company and Wood, No. 1886, said petition for certiorari being docketed in this court, as No. 825, October Term, A. D. 1914; that on the 15th day of

March, 1915, an order was entered in this court in said case No. 825, granting said petition, and that said cause is now pending in this court.

V. Your petitioner further shows that the Circuit Court of Appeals for the Sixth Circuit committed error in its judgment and decree in said cause No. 2322, and that the decree now standing in said cause in said District Court for the Eastern Division of the Northern District of Ohio is unjust and erroneous, for the following reasons:

(a) In that it dismissed your petitioner's Bill of Complaint therein for want of equity:

(b) In that it does not sustain and hold valid Claim 8 of Letters Patent No. 538,809, Claims 1, 2 and 3 of Letters Patent No. 691,332 and Claims 7 and 9 of Letters Patent No. 741,644.

(*c*) In that it does not hold each of said six claims to be infringed by the defendant's tie plate;

(*d*) In that it does not direct the issuance of an injunction against the defendant therein restraining further infringement of Letters Patent No. 691,332 and 721,644 (Letters Patent No. 538,809 having expired *pendente lite*);

(*e*) In that it does not direct an accounting for profits and damages with respect to said infringement of each of said Letters Patent; and

(*f*) In that it directs that the defendants shall recover costs to be taxed.

VI. Your petitioner further shows that in the said causes in the Sixth and Seventh Circuits aforesaid, the patents sued on were the same; the defendants' structure alleged to be an infringement was the

same; and the same evidence and exhibits were filed in each case, so that, excepting for the differences in the parties defendant, proofs in said two causes are identical, as stated in a copy of a stipulation of counsel hereto attached as Exhibit "A."

VII. Wherefore, your petitioner, The Railroad Supply Company, respectfully prays:

First: That a *writ of prohibition* may issue out of and under the seal of this court directed to the District Court of the United States for the Eastern Division of the Northern District of Ohio to prohibit the carrying into effect of the said decree entered on the 20th day of July, 1914, in said cause entitled *The Railroad Supply Company* v. *The Elyria Iron & Steel Company,* and to prohibit any and all further proceedings in said cause in said District Court until the further order of this court;

Second: That a *writ of certiorari* may be issued out of and under the seal of this court directed to the United States Circuit Court of Appeals for the Sixth Circuit commanding said court to certify and send to this court, on a day certain therein to be named, a full and complete transcript of the record of all proceedings in said court in said cause, entitled *The Railroad Supply Company* v. *The Elyria Iron & Steel Company,* No. 2322, to the end that said cause may be reviewed and determined by this court in accordance with the statutes in such case made and provided;

Third: That the original of said stipulation of counsel may be filed with and treated as part of the return upon said writ of certiorari, and as waiving the filing of a duplicate record;

Fourth: That the record in said cause No. 825 entitled *The Hart Steel Company and Guilford S. Wood, Petitioners,* v. *The Railroad Supply Company, Respondent,* be received and treated as the record in this cause in accordance with said stipulation; and

Fifth: That this cause be set for hearing with said cause for No. 825.

And your petitioner will forever pray.

THE RAILROAD SUPPLY COMPANY,
By HENRY S. HAWLEY,
President.

Attest:
E. H. BELL,
Secretary.

TAYLOR E. BROWN,
CHARLES C. LINTHICUM,
CLARENCE E. MEHLHOPE,
Solicitors and Counsel for Petitioner.

IN THE SUPREME COURT OF THE UNITED STATES,

OCTOBER TERM, A. D. 1914.

The Railroad Supply Company,
Petitioner,
vs.
The Elyria Iron & Steel Company,
Respondent.

Petition for writ of prohibition to the United States District Court for the Eastern Division of the Northern District of Ohio and for writ of certiorari to the United States Circuit Court of Appeals for the Sixth Circuit.

NOTICE.

Frank F. Reed, Esq., Edward S. Rogers, Esq., Frederick P. Fish, Esq.,
Solicitors and of Counsel for Respondent,
Peoples Gas Building, Chicago.

GENTLEMEN:

You are hereby notified that on Monday, April 5, 1915, I shall be and appear in the Supreme Court of the United States at Washington, D. C., and ask leave to file therein the foregoing Petition for Writs of Prohibition and of Certiorari, together with the accompanying brief in support thereof; three copies of which petition and brief are herewith delivered to you. You are entitled to oppose, if you so desire.

TAYLOR E. BROWN.

Service of the foregoing notice acknowledged and receipt of three copies of the said petition and brief received this 22nd day of March, A. D. 1915.

FRANK F. REED.
Counsel for Respondent.

EXHIBIT A.

IN THE

SUPREME COURT OF THE UNITED STATES.

OCTOBER TERM, A. D. 1914.

The Railroad Supply Company,
Petitioner,
vs.
The Elyria Iron & Steel Company,
Respondent.

Petition for Writ of Prohibition to the United States District Court for the Eastern Division of the Northern District of Ohio, and for Writ of Certiorari to the United States Circuit Court of Appeals for the Sixth Circuit.

STIPULATION.

IT IS HEREBY STIPULATED by and between counsel for the respective parties to the above entitled cause as follows:

I. That the patents sued on, the proofs and exhibits filed in said cause and the printed records, with minor and immaterial exceptions, are identical with the patents sued on, and the proofs, exhibits and printed records filed in a cause now pending in the Supreme Court of the United States, No. 825, October Term, A. D. 1914, entitled *The Hart Steel Company and Guilford S. Wood, Petitioners,* v. *The Railroad Supply Company, respondent.*

II. That in the event of the petition in the above entitled cause being granted, counsel for respondent hereby agrees that, the court consenting thereto, a copy of this stipulation may be attached to and made a part of the return to the Writ of Certiorari directed to the United States Circuit Court of Ap-

peals for the Sixth Circuit, in lieu of a transcript of the record in this cause and in satisfaction of said writ; and that for all purposes of the review of the above entitled cause in this court the record and exhibits filed or to be filed in the pending cause, Docket No. 825, entitled *The Hart Steel Company and Guilford S. Wood, Petitioners,* v. *The Railroad Supply Company, Respondent,* may be used and considered in all respects as the record and exhibits in the cause of *The Railroad Supply Company, Petitioner,* v. *The Elyria Iron & Steel Company, respondent.*

III. It is further stipulated that, in the event of the petition in the above entitled cause being granted, the same may be heard, the court consenting thereto, at the same time as and together with the hearing in the said pending cause, Docket No. 825, entitled *The Hart Steel Company and Guilford S. Wood, Petitioners,* v. *The Railroad Supply Company, respondent,* and that the briefs by counsel for the respective parties may be entitled in and received in both cases.

Chicago, Illinois, March 22, 1915.

TAYLOR E. BROWN,
Counsel for The Railroad Supply Company.

FRANK F. REED,
Counsel for The Elyria Iron and Steel Company.

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IN THE

SUPREME COURT OF THE UNITED STATES.

OCTOBER TERM, A. D. 1914.

THE RAILROAD SUPPLY COMPANY,
Petitioner,

vs.

ELYRIA IRON & STEEL COMPANY,
Respondent.

Petition for a Writ of Prohibition to the United States District Court for the Eastern Division of the Northern District of Ohio and for a Writ of Certiorari to the United States Circuit Court of Appeals for the Sixth Circuit.

BRIEF FOR PETITIONER.

TAYLOR E. BROWN,
CHARLES C. LINTHICUM,
CLARENCE E. MEHLHOPE,
COUNSEL FOR PETITIONER.

BARNARD & MILLER PRINT, CHICAGO.

IN THE

SUPREME COURT OF THE UNITED STATES,

OCTOBER TERM, A. D. 1914.

THE RAILROAD SUPPLY COMPANY,
Petitioner,

vs.

THE ELYRIA IRON & STEEL COMPANY,
Respondent.

Petition for a Writ of Prohibition to the United States District Court for the Eastern Division of the Northern District of Ohio and for a Writ of Certiorari to the United States Circuit Court of Appeals for the Sixth Circuit.

BRIEF FOR PETITIONER.

MAY IT PLEASE THE COURT:

The following facts are fully set forth in the accompanying petition:

I. *Two Suits in Different Circuits.* The petitioner, The Railroad Supply Company, as the owner of three Letters Patent granted to B. Wolhaupter for improvements in Tie Plates, instituted two suits to restrain infringement thereof and to recover damages therefor. One suit was brought in the Sixth Circuit against The Elyria Iron and Steel Company, a manufacturer. The other was brought in the Seventh Circuit against The Hart Steel Company, the vendor, and Guilford S. Wood, its selling agent. The usual prayers for relief by an injunction and

an accounting were asked for in each bill of complaint.

II. *Proofs Identical.* The proofs were duplicated. The patents, proofs, exhibits and the Tie Plates alleged to be infringements were identical in the two cases. The defendants were different. In each case the trial court held non-infringement and dismissed the bill of complaint for want of equity at complainant's costs.

III. *Circuit Courts of Appeals Disagreed.* The Circuit Court of Appeals for the Sixth Circuit upon the appeal in the Elyria Company suit, held the three patents invalid and also not infringed and affirmed the decree of the District Court. The Circuit Court of Appeals for the Seventh Circuit upon an appeal in the Hart Company suit, held the three patents to be valid and infringed and reversed the decree of the District Court.

IV. *Petition for Writ of Certiorari Granted in One Case.* The case against The Hart Steel Company and Wood is now in this court as Docket No. 825, October Term, A. D. 1914, upon a writ of certiorari applied for on March 8, 1915. Said petition was granted March 15, 1915, and the writ has been issued.

V. *Similar Relief Asked in the Other Case.* The petitioner, The Railroad Supply Company, now seeks to have the case against The Elyria Iron and Steel Company reviewed in this court at the same time as, and upon the record now filed in the said Hart case No. 825, for the reason that in the event of an affirmance by this court of the decree ordered by the Court of Appeals in the said Hart case, your petitioner would otherwise have no affirmative relief against

the Elyria Company in the Sixth Circuit and to which it would be clearly entitled.

This petition should be granted and appropriate orders entered, that full and complete relief may be had in the premises.

Respectfully submitted,

TAYLOR E. BROWN,
CHARLES C. LINTHICUM,
CLARENCE E. MEHLHOPE,
Counsel for Petitioner.

Chicago, March 22, 1915.

Office Supreme Court, U. S.
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IN THE

SUPREME COURT OF THE UNITED STATES

OCTOBER TERM, A. D. 1916.

No. 95.

THE RAILROAD SUPPLY COMPANY, *Plaintiff-Petitioner,* vs. THE ELYRIA IRON & STEEL COMPANY, *Defendant-Respondent.*	On Writ of Certiorari to the United States Circuit Court of Appeals for the Sixth Circuit.

BRIEF AND ARGUMENT FOR PETITIONER.

TAYLOR E. BROWN,
Counsel for Petitioner.

CLARENCE E. MEHLHOPE,
Of Counsel.

CHAMPLIN LAW PRINTING CO.

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IN THE

Supreme Court of the United States

OCTOBER TERM, A. D. 1916.

No. 95.

THE RAILROAD SUPPLY COMPANY, *Plaintiff-Petitioner,* vs. THE ELYRIA IRON & STEEL COMPANY, *Defendant-Respondent.*	On Writ of Certiorari to the United States Circuit Court of Appeals for the Sixth Circuit.

BRIEF AND ARGUMENT FOR PETITIONER.

I.

SUBJECT-MATTER.

These litigations relate to the validity and infringement of three United States Letters-Patent granted to Benjamin Wolhaupter, for Improvements in Tie Plates, and duly assigned to the Railroad Supply Company.

Note: For convenience we shall herein refer to The Railroad Supply Company as "Plaintiff" and to the Petitioners in No. 67 and the Respondent in No. 95, as "Defendants"—sometimes also using as short corporate designations the "Supply Co.", the "Hart Co." and the "Elyria Co.," respectively.

All citations to "Vol. —, p. —" refer to the volume and page of the printed record in No. 67, both cases being heard upon one record, in accordance with stipulations of counsel confirmed by an Order of this Court entered in each case, March 15, 1915, and April 12, 1915, respectively.

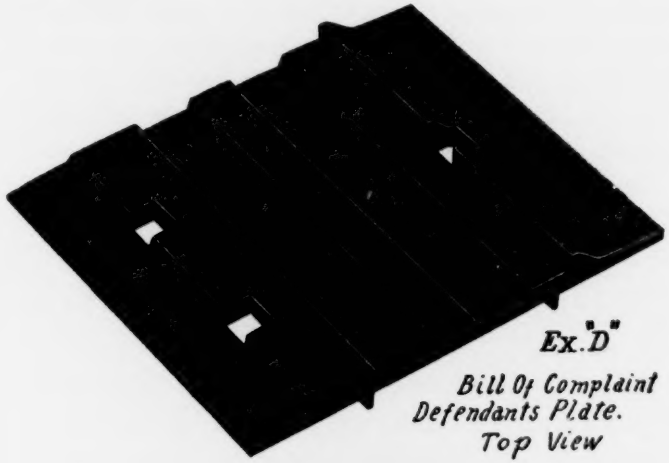
A tie plate is an armour or protecting piece of metal, usually of rolled steel, placed between the rails of a railway track and the upper face of the tie,—one on each end of the tie. It functions to hold the rails in place, to prevent "canting" or overturning of the rail, to prevent "spreading" of the rails out of gauge, to prevent spike cutting and generally to reduce to a negligible quantity the wearing away of the wood tie, and thus prevent accidents, save expense and insure a better roadbed.

A Tie Plate differs from a rail joint (which primarily unites the proximate ends of adjacent rails) in this, that the rail joint is secured to and moves with the rail, while the Tie Plate is secured to the tie, and does not move with the rail.

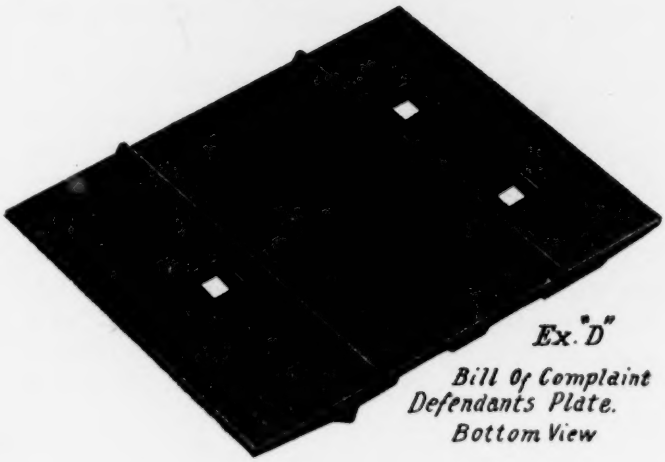
II.

STATEMENT OF FACTS.

The form of Tie Plate in issue in these cases is here illustrated.



Ex. "D"
Bill Of Complaint
Defendants Plate.
Top View



Ex. "D"
Bill Of Complaint
Defendants Plate.
Bottom View

There is no dispute between the parties as to certain facts relating to this plate. It has been fabricated by the Elyria Company, and also at the mills of the Railroad Supply Company. The particular lot of plates which gave rise to these suits was sold to the Santa Fe Railroad by the Hart Company and Wood. Similar plates have since been purchased by the Santa Fe road from the Supply Company. Neither is there any dispute about the title to the patents resting in the Supply Co. The issues raised are invalidity and non-infringement.

The three patents and the claims thereof in issue are as follows:

No. 538,809 granted May 7, 1895, Claim 8.

No. 691,322 granted Jan. 14, 1902, Claims 1, 2 and 3.

No. 721,644 granted Feb. 24, 1903, Claims 7 and 9.

The first Wolhaupter patent, No. 538,809, expired *pendente lite.*

In the Hart case (commenced Dec. 9, 1908) the District Court held non-infringement, and on December 28, 1911, a decree was entered dismissing the plaintiff's bill of complaint (R. Vol. 3, p. 1059). In the Elyria case, (commenced Dec. 9, 1908), the District Court (Judge Day), entered a similar decree on March 4, 1912 (R. Vol. 3, p. 1402). The Circuit Court of Appeals for the Sixth Circuit in the Elyria case, on the 7th day of April, 1914, affirmed the Decree appealed from in an opinion holding non-infringement and also holding invalidity of each of the three Wolhaupter patents (R. Vol. 3,

p. 1386). The Circuit Court of Appeals for the Seventh Circuit, in the Hart case, on the 5th day of January, 1915, reversed the decree appealed from. In its opinion, said court differed from the finding by the Sixth Circuit Court of Appeals and held all three of the Wolhaupter patents to be valid and each one infringed (R. Vol. 3, p. 1408).

A writ of certiorari was granted by this court in the Hart case, No. 67 (R. Vol. 3, p. 1430), and subsequently a similar writ was granted in the Elyria case, No. 95. This court has made appropriate orders in each case for the hearing of the two causes together and upon the single printed record filed in the Hart case, No. 67. The questions involved are set forth in the errors assigned, (*post*, p. 9).

The Railroad Supply Company (the respondent in No. 67 and petitioner in No. 95), is an Illinois corporation, having originally a small capital, which it was obliged to increase, to $500,000, to accommodate its growing business in the Wolhaupter patented Tie Plates. In addition to Tie Plates, it manufactures and sells electrical signalling devices and other track supplies and devices used in and upon railways. The manufacture and sale of the patented Tie Plates is by far the major part of its business, and the Wolhaupter patents constitute its greatest single asset (Bell, R. Vol. 1, p. 80).

Offices are maintained by the company in Chicago, New York, St. Louis, Denver and San Francisco, in addition to which it has a factory in Chicago. Milled products, such as the Tie Plates in controversy, are fabricated in rolling mills at Steelton and Pittsburgh, Gary, Buffalo, Milwaukee,

South Chicago and Joliet. It has facilities for turning out large orders of the patented Tie Plates upon short notice (Q. 16, R. Vol. 1, p. 45). Its capacity is practically unlimited. It has resources, in addition to its capital stock, sufficient to meet the demands of the public and of the trade (R. Vol. 1, p. 45).

The Elyria Iron and Steel Co. is an Ohio corporation having a rolling mill at Elyria, Ohio, where the 5,000 tons of Tie Plates here in controversy were fabricated. These plates were sold by the Elyria Company to the Hart Company, one of the petitioners in No. 67 (R. Vol. 1, pp. 45-6).

The Hart Steel Company is an Illinois corporation, separate and distinct from the Elyria Company, but which acts nevertheless as the "selling organization" for the Elyria Company for "some" of its mill products (McKee, Q. 6, R. Vol. 1, p. 487). Guilford S. Wood is the manager of the Hart Company. In 1908, the Hart Company and Wood *sold* the said lot of 5,000 tons of Tie Plates (fabricated at Elyria) to the Atchison, Topeka & Santa Fe Railroad, herein styled the Santa Fe or the Santa Fe System (McKee, R. Vol. 1, p. 496). This railroad had for many years purchased Wolhaupter Tie Plates from the Railroad Supply Company, in two different styles or designs (Bell, R. Vol. 1, p. 90; Hawley, R. Vol. 1, pp. 40-3).

The sale by the Hart Company to the Santa Fe was at a price below that at which the Supply Company was willing to sell, but the Hart Co. did not accept the order for these 5,000 tons until after the Santa Fe System had agreed to indemnify it against

damage or loss from infringement suits (R. Vol. 2, p. 854).

On the 9th and 11th of December, 1908, immediately upon the *delivery* of this first lot of 5,000 tons of plates, the plaintiff filed its bills of complaint in the Seventh and the Sixth Circuits. In that same month, the Santa Fe System placed an order with the Railroad Supply Co. for Tie Plates identical with those in issue (R. Vol. 1, pp. 50-1). It has continued, *pendente lite*, to so purchase from the Supply Company said Tie Plates to the amount of 84,000 tons or 168,308,718 pounds (R. Vol. II, p. 865). Like the Santa Fe, most of the important railroads of this country have adopted the Wolhaupter Tie Plate as "Standard" (R. Vol. 1, p. 44).

Nearly all of the 1,300 railroads of this country have purchased and used the Wolhaupter patented Tie Plate (R. Vol. 1, p. 43). This is graphically illustrated in Exhibit No. 58 Sales Map (R. Vol. 1, p. 89). These Wolhaupter plates soon became known, on account of their interrupted top bearing surface, as "corrugated" top plates.

The evidence shows that in the *twenty-year* period from 1890 to 1909, inclusive (with records for the year 1898 missing) something over forty-eight million (48,000,000) flat top Tie Plates were sold. In the *fourteen and a third year* period from 1895 to 1909, inclusive, over one hundred and eighty-eight million (188,800,000) Wolhaupter corrugated top Tie Plates were sold. The sales in the *one year* 1909 of Wolhaupter Tie Plates, amounting to 39,210,595 plates, were about thirteen-sixteenths (13/16) of *all the flat top* plates sold in the *twenty*

years previous. See Sales Chart as corrected, Exhibit No. 57 (R. Vol. 1, p. 88). Also Bell Depn. (R. Vol. 1, p. 86).

The best flat top Tie Plate on the market in May, 1895, the date when the Wolhaupter patent issued, was the *Servis* plate (Wolhaupter Dep. R. Vol. 1, p. 170). *All plates on the market prior to that date were flat top plates* (Hawley, R. Vol. 1, p. 43), while most of those sold on the market since that date have been corrugated top plates.

The findings of fact in the Hart case on this point were as follows:

> "Prior to 1870, the tie protector was a wooden shingle or plate. From about 1870 to 1880, a simple metal plate with a flat top and flat bottom was used. Between 1880 and 1895, when Wolhaupter made his disclosure, a channel plate of equal thickness throughout, fitted over the tie like a cap, a flat topped plate with tie engaging devices on the bottom, a plate flat on top and bottom with a shoulder on the top to resist lateral pressure of the rail, and the same sort of a plate with tie engaging devices on the bottom, were in actual use; but never prior to Wolhaupter had the Tie Plate of Claim 8 been produced. *And since then the entire development has been along the line of improving the Tie Plate of Claim* 8."
>
> (Opinion, C. C. A. Hart case, R. Vol. 3, p. 1408.)
>
> (Bell Dep., R. Vol. 1, pp. 86-7.)
>
> (Hawley Dep., R. Vol. 1, p. 43.)
>
> (Wolhaupter Dep., R. Vol. 1, p. 162.)

The evidence shows that the only attempt at infringement, prior to that upon which the present suits are based, was in 1904, by the Southern Pa-

cific Railroad, one of the "Harriman Lines"; which infringement was promptly adjusted upon threat of suit from the owners of the Wolhaupter patents. The Harriman Lines acknowledged the validity of and took a license under said Wolhaupter patents.

(Wallace Dep., R. Vol. 2, p. 555.)
(Hawley Dep., X-Q. 20, R. Vol. 1, p. 46.)
(Harriman License, Ex. No. 174, R. Vol. 2, p. 876.)

III.

ASSIGNMENTS OF ERROR.

In section V of the petition for a writ of certiorari in the Elyria case, No. 95, errors were assigned as follows:

> "That the Circuit Court of Appeals for the Sixth Circuit committed error in its judgment and decree in said cause No. 2322, and that the decree now standing in said cause in said District Court for the Eastern Division of the Northern District of Ohio is unjust and erroneous, for the following reasons:
>
> (a) In that it dismissed your petitioner's bill of complaint therein for want of equity.
>
> (b) In that it does not sustain and hold valid Claim 8 of Letters-Patent No. 538,809, Claims 1, 2 and 3 of Letters-Patent No. 691,332 and Claims 7 and 9 of Letters-Patent No. 741,644.
>
> (c) In that it does not hold each of said six claims to be infringed by the defendant's Tie Plate.
>
> (d) In that it does not direct the issuance of an injunction against the defendant therein restraining further infringement of Letters-

Patent No. 691,332 and 721,644 (Letters-Patent No. 538,809 having expired *pendente lite*).

(e) In that it does not direct an accounting for profits and damages with respect to said infringement of each of said Letters-Patent; and

(f) In that it directs that the defendants shall recover costs to be taxed."

Under these formal assignments of error we present the following propositions, applicable to both cases Nos. 67 and 95, for the determination of the court:

Point 1. The three Wolhaupter Letters-Patent in suit being *prima facie* valid, the burden of proving the contrary being upon the defendant and not having been sustained, the prior art disclosing nothing either to anticipate or to limit the scope of the patents, the patented devices having proved successful in use and a remarkable showing of public recognition having been made, that invention is clear and each of the patents should be upheld. The decree in the Elyria case, No. 95, should therefore be reversed and that in the Hart case, No. 67, be affirmed.

Point 2. The claims of the patents in suit that are in issue, are in clear and understandable terminology; they are not limited by the prior art, nor to be limited otherwise than as indicated by their own terms; they require no "reading" into them, by "construction," of any element or feature disclosed in their patent specifications or otherwise, either for the purpose of differentiating them from the claims not in issue or for upholding their validity; they read directly upon the defendants'

structure; and therefore infringement is certain, and the decree in No. 95 should be reversed and that in No. 65 be affirmed.

While these points raise the main issues in both cases, we shall herein briefly reply to the various points presented in the main and the supplemental briefs filed by our adversaries.

IV.

BRIEF OF THE LAW.

I. Letters-Patent are prima facie evidence of novelty, of utility and of patentable invention.

Hogg v. *Emerson*, 6 How. 437.
Corning v. *Burden*, 15 How. 252.
Railroad Co. v. *Stimpson*, 14 Peters, 448.
Blanchard v. *Putnam*, 8 Wall. 420.
Rubber Co. v. *Goodyear*, 9 Wall. 788.
Seymour v. *Osborne*, 11 Wall. 516.
Coffin v. *Ogden*, 18 Wall. 120.
Mitchell v. *Tighlman*, 19 Wall. 287.
Klein v. *Russell*, 19 Wall. 433.
Cammeyer v. *Newton*, 94 U. S. 225.
Roemer v. *Simon*, 95 U. S. 214.
Smith v. *Dental Vulcanite Co.*, 93 U. S. 487.
Lehnbeuter v. *Holthouse*, 105 U. S. 94.
Cantrell v. *Wallick*, 117 U. S. 689.
St. Paul Works v. *Sterling*, 140 U. S. 184.
Deering v. *Winona Har. Wks.*, 155 U. S. 286.
Dashiell v. *Grosvenor*, 162 U. S. 425.
U. S. v. *Bell Telephone Co.*, 167 U. S. 224.

II. (a) The burden of proof is upon him who attacks the patent; Letters-Patent being prima facie valid.

Corn Planter Patent, 23 Wall. 181.
Smith v. *Goodyear D. V. Co.*, 93 U. S. 486.
Roemer v. *Simon*, 95 U. S. 214.
Bates v. *Coe*, 98 U. S. 31.
Imhaeuser v. *Buerk*, 101 U. S. 647.
Cantrell v. *Wallick*, 117 U. S. 689.
Herman v. *Youngstown Car Mfg. Co.*, 191 Fed. 579 (C. C. A. 6th).

(b) Anticipation and prior use must be proven "beyond a reasonable doubt."

Coffin v. *Ogden*, 18 Wall. 120.
Marsh v. *Seymour*, 97 U. S. 348.
Cantrell v. *Wallick*, 117 U. S. 689.
The Telephone Cases, 126 U. S. 1.
The Barbed Wire Patent, 143 U. S. 275.
Deering v. *Winona H. Wks.*, 155 U. S. 286.
Kearney v. *Lehigh V. Ry. Co.*, 32 Fed. 320 (Mr. Justice Bradley).
Fairbanks v. *Stickney*, 123 Fed. 79, 82 (C. C. A. 8th).
Canda v. *Mich, Mall. I. Co.*, 124 Fed. 486 (C. C. A. 6th).
Farmers Mfg. Co. v. *Sprucks Co.*, 127 Fed. 691 (C. C. A. 4th).

III. (a) Patents should be construed in a liberal spirit and under a fair application of the rule, "UT RES MAGIS VALEAT, QUAM PEREAT" should be so interpreted as to uphold and not destroy the rights of the inventor.

Grant v. *Raymond*, 6 Peters, 218.

Hogg v. *Emerson*, 6 How. 437.
Corning v. *Burden*, 15 How 252.
Winans v. *Denmead*, 15 How. 330.
Battin v. *Taggart*, 17 How. 74.
Turrill v. *Railroad Co.*, 1 Wall. 491.
Goodyear v. *Rubber Co.*, 2 Wall. 356.
Commn. v. *Whitely*, 4 Wall. 522.
Rubber Co. v. *Goodyear*, 9 Wall. 788.
Eureka Co. v. *Bailey*, 11 Wall. 488.
Coffin v. *Ogd* Wall. 120.
Klein v. *Russ* .9 Wall. 433.
The Corn Planter Pats., 23 Wall. 181.
Smith v. *Vulcanite Co.*, 93 U. S. 487.
Sewell v. *Jones*, 91 U. S. 171.
Merrill v. *Yeomans*, 94 U. S. 568.
Lehnbeuter v. *Holthouse*, 105 U. S. 94.
Loom Co. v. *Higgins*, 105 U. S. 580.
Ry. Co. v. *Natl. Brake Co.*, 110 U. S. 229.
Cantrell v. *Wallick*, 117 U. S. 689.
Yale v. *Sargent*, 117 U. S. 536.
Magowan v. *New York Co.*, 141 U. S. 332.
Gandy v. *Main Belting Co.*, 143 U. S. 587.
The Barbed Wire Pat., 143 U. S. 275.
Sessions v. *Romadka*, 145 U. S. 29.
Krementz v. *S. Cottle Co.*, 148 U. S. 556.
National Hollow B. B. Co. v. *International B. B. Co*, 106 Fed. 715 (C. C. A. 8th Cir.).
Wagner T. W. Co. v. *Wycoff, Seamans & Benedict*, 151 Fed. 585 (C. C. A. 2nd Cir.).

(b) Patent claims should not be defeated by the application of artificial, or too technical, rules of interpretation.

Winans v. *Denmead*, 15 How. 341.
Smith v. *Vulcanite Co.*, 93 U. S. 486.
Elizabeth v. *Paving Co.*, 97 U. S. 126.
Machine Co. v. *Murphy*, 97 U. S. 120.
Ives v. *Hamilton*, 92 U. S. 426.
Electric Co. v. *LaRue*, 139 U. S. 601.
McClain v. *Ortmayer*, 141 U. S. 425.
Magowan v. *Packing Co.*, 141 U. S. 332.
Barbed Wire Pat., 143 U. S. 275.
Topliff v. *Topliff*, 145 U. S. 171.
Hoyt v. *Horne*, 145 U. S. 320.
Potts v. *Creager*, 155 U. S. 597.
Westinghouse v. *Boyden*, 170 U. S. 537.
Consolidated Rubber Tire Co. v. *Diamond*, 220 U. S. 428.
Adams v. *Folger*, 120 Fed. 260 (C. C. A. 7th Cir.).

IV. A patent claim should not be narrowed by importing into it, by construction, ANY DISPENSABLE ELEMENT, in order to enable an infringer to escape the consequences of his infringement.

Rubber Co. v. *Goodyear*, 9 Wall. 788.
McCarthy v. *L. V. R. R. Co.*, 160 U. S. 110.
Lamson Cash Reg. Co. v. *Kepplinger*, 45 Fed. 249.

V. Claims in a patent must be DIFFERENTIATED FROM EACH OTHER, each being given its proper status. Each claim of a patent covers a complete invention and is in substance an independent patent.

Leeds & Catlin v. *Victor Talk. Mch. Co.*, 213 U. S. 301.
Boyd v. *Jamesville Tool Co.*, 158 U. S. 260.
U. S. Nickel Co. v. *Electric*, 25 Fed. 475.
Celluloid v. *Zylonite*, 27 Fed. 291.
Bresnahan v. *Tripp Giant L. Co.*, 102 Fed. 889 (C. C. A. 1st).
20th Cent. H. & V. Co. v. *Taplin R. C. Co.*, 181 Fed. 96 (C. C. A. 5th).

VI. (a) "Inventive discovery involves the intelligent apprehension of relations not before recognized by others, although actually existing, followed by the conception of how they can be practically utilized."

Eck v. *Kutz*, 132 Fed. 779.

(b) "Invention of a combination of elements consists in FIRST CONCEIVING that a new and desirable result may be obtained by bringing about a relationship of elements which no one before had perceived, and then going forth to find the things that may be utilized in the new required relationship" (Rec. Vol. III, 1421).

Gandy v. *Main Belting Co.*, 143 U. S. 587.
Dobson v. *Cubley*, 149 U. S. 117.
Krementz v. *S. Cottle Co.*, 149 U. S. 556.
Keystone Mfg. Co. v. *Adams*, 151 U. S. 139.
Seabury v. *Am. Ende*, 152 U. S. 561.

Potts v. *Creager*, 155 U. S. 597.
Faries Mfg. Co. v. *Brown*, 121 Fed. 547 (C. C. A. 7th).

VII. No definition of "an invention" applicable to EACH AND EVERY case having been promulgated, either in the statute or the decisions of the courts—the CONTROLLING PRINCIPLE DEDUCIBLE from the decisions of the Supreme Court may be stated to be a steadfast determination to protect the man who has actually done something new by which "NEW AND BENEFICIAL RESULTS" were produced, one who has "ACTUALLY ADVANCED THE CONDITION OF MANKIND," one who has produced "SOMETHING BY WHICH THE WORK OF THE WORLD IS DONE BETTER AND MORE EXPEDITIOUSLY THAN IT WAS BEFORE."

Consol'd Co. v. *Diamond*, 220 U. S. 428.
Topliff v. *Topliff*, 145 U. S. 156.
Keystone Co. v. *Adams*, 151 U. S. 139.
Krementz v. *S. Cottle Co.*, 148 U. S. 556.
Blake v. *San Francisco*, 113 U. S. 679.
Star Brass Wks. v. *General Elec. Co.*, 111 Fed. 398 (C. C. A. 6th, Mr. Justice Day).
Hallock v. *Davidson*, 107 Fed. 482.

VIII. (a) "Simplicity of an invention, so far from being an objection, may constitute its greatest excellence and value."

Ryan v. *Goodwin*, 3 Sumner, 514 (Mr. Justice Storey).
The Barbed Wire Pat., 143 U. S. 275.
Gandy v. *Main Belting Co.*, 143 U. S. 587.

Topliff v. *Topliff*, 145 U. S. 156.
Krementz v. *S. Cattle Co.*, 149 U. S. 556.
Keystone Mfg. Co. v. *Adams*, 151 U. S. 139.
Potts v. *Creager*, 155 U. S. 597.
Consolidated Co. v. *Diamond*, 220 U. S. 428.
Gould v. *Pratt*, 70 Fed. 624 (Coxe, D. J.).
Faries Mfg. Co. v. *Brown*, 121 Fed. 547-50 (C. C. A. 7th).
Brown v. *Huntington Piano Co.*, 134 Fed. 735 (C. C. A. 2nd).

(b) "If there is any invention, then the law will not attempt to measure its extent or degree."

Washburn & Moen Co. v. *Haish*, 4 Fed. 900 (Blodgett, J.).
Many v. *Sizer*, 1 Fish. 17.
Middleton Tool Co. v. *Judd*, 3 Fish. 141.
Bliss v. *Brooklyn*, 10 Blatch. 521.

IX. Large sales and extensive use of a patented device are evidence of utility and patentable invention; and, in all cases of doubt, proof thereof turns the scale in favor of the patent.

Mineral Sep. Co., Ltd. v. *Hyde*, —U. S.—, (decided Dec. 16, 1916), 37 S. C. Rep. 82.
Consolidated Rubber Tire Co. v. *Diamond*, 220 U. S. 428.
Smith v. *Goodyear D. V. Co.*, 93 U. S. 435.
Robertson v. *Blake*, 94 U. S. 728.
Loom Co. v. *Higgins*, 105 U. S. 580.
Hollister v. *Benedict Co.*, 113 U. S. 59.
Valve Co. v. *Valve Co.*, 113 U. S. 157.
Eames v. *Andrews*, 122 U. S. 40.
Magowan v. *N. Y. B. & P. Co.*, 141 U. S. 332.

The Barbed Wire Patent, 143 U. S. 275.
Gandy v. *Main Belt. Co.*, 143 U. S. 587.
Sessions v. *Romadka*, 145 U. S. 44.
Topliff v. *Topliff*, 145 U. S. 164.
Krementz v. *S. Cottle Co.*, 148 U. S. 556.
National Hat Co. v. *Hidden*, 147 U. S. 482.
Mfg. Co. v. *Adams*, 151 U. S. 139.
Potts v. *Creager*, 155 U. S. 609.
Natl. C. R. Co. v. *Boston*, 156 U. S. 502.
Carnegie Steel Co. v. *Cambria I. Co.*, 185 U. S. 403-29.

Some Court of Appeals decisions:

Brunswick B. C. Co. v. *Thum*, 111 Fed. 904 (2nd Cir.)
Schenck v. *Singer Mfg. Co.*, 77 Fed. 841 (2nd Cir.)
Goss P. P. Co. v. *Scott*, 108 Fed. 253 (3rd Cir.).
Farmers Mfg. Co. v. *Sprucks Co.*, 127 Fed. 691 (4th Cir.).
Ideal Stopper Co. v. *Crown C. & S. Co.*, 131 Fed. 250 (4th Cir.).
Kalamazoo Ry. Co. v. *Duff Co.*, 113 Fed. 267 (6th Cir.).
Star Brass Co. v. *General Elec. Co.*, 111 Fed. 398 (6th Cir.).
National Hollow B. B. Co. v. *Interchangeable Co.*, 106 Fed. 693 (8th Cir.).
Kinloch Tel. Co. v. *Western Elec. Co.*, 113 Fed. 665 (8th Cir.).
Holmes v. *Truman*, 67 Fed. 543 (9th Cir.).
Letson v. *Alaska P. Assn.*, 130 Fed. 140 (9th Cir.).

X. An infringer is estopped from denying the utility of the infringing device he is making, using or selling.

Eureka Co. v. *Bailey Co.*, 11 Wall. 488.
Lehnbeuter v. *Holthouse*, 105 U. S. 27.
Western Elec. Co. v. *LaRue*, 139 U. S. 601.
Gandy v. *Main Belting Co.*, 143 U. S. 587.
Dubois v. *Kirk*, 158 U. S. 58.

XI. (a) New elements in a combination claim are not required. A novel combination of severally old elements producing new and useful results or an old result in a new or improved manner is patentable, if involving any inventive ingenuity, and is entitled to the same protection as a claim for a new and improved article or machine.

Winans v. *Denmead*, 15 How. 330.
Gill v. *Wells*, 22 Wall. 1.
Seymour v. *Osborne*, 11 Wall. 516.
Smith v. *Vulcanite Co.*, 93 U. S. 475.
Fuller v. *Yentzer*, 94 U. S. 288.
Schumacher v. *Cornell*, 96 U. S. 549.
Bates v. *Coe*, 98 U. S. 31.
Imhaeuser v. *Buerk*, 101 U. S. 647.
Union Meter Co. v. *Desper*, 101 U. S. 332.
Parks v. *Booth*, 102 U. S. 96.
Pickering v. *McCullough*, 104 U. S. 310.
Loom Co. v. *Higgins*, 105 U. S. 580.
Rowell v. *Lindsay*, 113 U. S. 97.
Dryfuss v. *Weise*, 124 U. S. 32.
Magowan v. *Packing Co.*, 141 U. S. 332.
Sessions v. *Romadka*, 145 U. S. 29.
Seabury v. *Am. Ende*, 152 U. S. 561.
Richards v. *Chase Elev. Co.*, 159 U. S. 447.

General Fireproofing Co. v. *Expanded Metal Co.*, 214 U. S. 366.
Consolidated Co. v. *Diamond*, 220 U. S. 428.
National Hollow B. B. Co. v. *Interchangeable B. B. Co.*, 106 Fed. 693 (C. C. A. 8th).
Benbow, Brammer Mfg. Co. v. *Schroeder*, 106 Fed. 918 (C. C. A. 8th).

(b) Where one element of a combination is found in one prior patent, publication or machine, another part or element in another prior patent and so on, indefinitely, the court will not, from the whole or any given number of separately old elements, determine the issue of novelty adversely to the patentee. WANT OF NOVELTY must be addressed TO THE COMBINATION AS AN ENTIRETY and not to its separate parts.

Prouty v. *Ruggles*, 16 Peters 336.
Stimpson v. *Railroad Co.*, 10 How. 329.
Gill v. *Wells*, 22 Wall. 1.
Corn Planter Pat., 23 Wall. 181.
Bates v. *Coe*, 98 U. S. 31.
Imhaeuser v. *Buerk*, 101 U. S. 647.
Parks v. *Booth*, 102 U. S. 104.
Wicke v. *Ostrum*, 103 U. S. 461.
Columbus Watch Co. v. *Robbins*, 64 Fed. 384 (C. C. A. 6th Cir.).
Indiana Mfg. Co. v. *Case Thresh. Mch. Co.*, 154 Fed. 365-69 (C. C. A. 7th Cir.).
St. Louis S. F. Mch. Co. v. *American S. F. Mch. Co.*, 156 Fed. 574 (C. C. A. 8th Cir.).
National Tube Co. v. *Aiken*, 163 Fed. 254 (C. C. A. 6th Cir.).

(c) The fact that an expert, **WITH THE PATENT IN SUIT BEFORE HIM**, might be able to build up the structure covered and claimed therein, by selecting and adopting various elements found in the prior art, does not overcome the presumption of invention arising from the patent grant.

Railroad Co. v. *Stimpson*, 14 Peters 448.
Seymour v. *Osborne*, 11 Wall. 516.
Mitchell v. *Tighlman*, 19 Wall. 287.
Cammeyer v. *Newton*, 94 U. S. 225
Roemer v. *Simon*, 95 U. S. 214.
Hanifen v. *Godschalk*, 84 Fed. 649 (Acheson, J.)
McConway & F. Co. v. *Sickle Iron Co.*, 92 Fed. 162 (Adams, J.).
McMichael Co. v. *Ruth*, 128 Fed. 706.

(d) It is not sufficient for purposes of anticipation, that a prior art device or prior patent **APPROACH VERY NEAR THE IDEA** of the patent in suit, or that **IT MAY EVEN SUGGEST THAT IDEA**. To anticipate, the prior device must so clearly disclose the idea of the patentee that it would be apparent to a mechanic of ordinary intelligence, who was not examining the prior device for the purpose of discovering in it the idea of the patent in suit (Rec. Vol. III, p. 1421).

The Telephone Cases, 126 U. S. 1.
Gordon v. *Warder*, 150 U. S. 47.
Yale Lock Co. v. *Norwich Bank*, 19 Blatch. 123 (Shipman, C. J.).
Wooster v. *Blake*, 8 Fed. 429 (Blatchford, C. J.).

Schenck v. *Singer Mfg. Co.*, 77 Fed. 841 (C. C. A. 2nd Cir.).

Hanifen v. *Godschalk*, 84 Fed. 649.

McConway Co. v. *Sickle*, 92 Fed. 162.

Tannage Pat. Co. v. *Donnalin*, 93 Fed. 811, 821.

Faries Mfg. Co. v. *Brown*, 121 Fed. 547 (C. C. A. 7th Cir.).

Ideal Stopper Co. v. *Crown C. & S. Co.*, 131 Fed. 244 (C. C. A. 4th Cir.).

XII. (a) Patents of the prior art are to be considered in accordance with the "LAW OF THEIR STRUCTURES."

Clough v. *Barker*, 106 U. S. 166.

Topliff v. *Topliff*, 145 U. S. 156.

Potts v. *Creager*, 155 U. S. 597.

(b) It is not sufficient for purposes of anticipation that the device relied upon might, BY A MODIFICATION, BE MADE TO ACCOMPLISH THE FUNCTION performed by the patent in question, IF IT WERE NOT DESIGNED by its maker nor adapted nor actually used for the performance of such function.

Hobbs v. *Beach*, 180 U. S. 383.

Topliff v. *Topliff*, 145 U. S. 156.

Johnson v. *Railway Co.*, 33 Fed. 501 (Coxe, D. J.).

Hobbs v. *Beach*, 92 Fed. 146 (C. C. A. 1st Cir.).

Hermann v. *Youngstown Car Mfg. Co.*, 191 Fed. 579 (C. C. A. 6th Cir.).

W. B. Scaife & Sons Co. v. *Falls City Woolen Mills*, 209 Fed. 210 (C. C. A. 6th Cir.).

XIII. A patent is not to be invalidated nor any rights thereunder denied to its owner because the device may not have been actually put into use by the patent owner. That fact gives no one a right to infringe the patent.

Bloomer v. *McQuewan*, 14 How. 539.

U. S. v. *American Bell Teleph. Co.*, 167 U. S. 249.

E. Bement & Sons v. *Natl. Harrow Co.*, 186 U. S. 70.

Continental Paper Bag Co. v. *Eastern*, 210 U. S. 405, and also the many cases there cited.

V.

ARGUMENT.

Track Evolution.

We ask the attention of your Honors to the main, and as we believe, **the only real issue in the case,** namely: **are the three Wolhaupter Letters-Patent in suit valid or invalid?** Do they disclose novel and practical devices brought into being by the exercise of that intuitive faculty of the mind in search of *new and useful results?* Do these patents disclose, in view of the facts with respect to the prior art, set forth in this record, and in view of the remarkable recognition of the patented Tie Plates, that Wolhaupter exercised inventive ingenuity or merely the skill of the ordinary mechanic?

If this main issue be settled in favor of the patentee, as it was by the Circuit Court of Appeals for the Seventh Circuit in the Hart case, the question of infringement will follow as matter of course.

If these patents are invalid, it matters not whether the defendants' Tie Plate infringes or does not infringe; and it is of no consequence, also, whether or not the Circuit Court of Appeals in the Hart case erred, in not considering the Sixth Circuit decree in the Elyria case, *res adjudicata.* These two questions become moot, if the Wolhaupter patents are invalid.

If these patents are valid, the claims in issue are clearly infringed, and the decree in the Sixth Circuit case will be reversed. So again, the denial of the motion to dismiss, in the Hart case, based upon alleged *res adjudicata,* becomes a moot question.

We propose, therefore, in this argument, not to consider the various questions raised in the main or the supplemental briefs, filed on behalf of the defendants, in the order therein presented but to first discuss the question of the validity of the patents in suit.

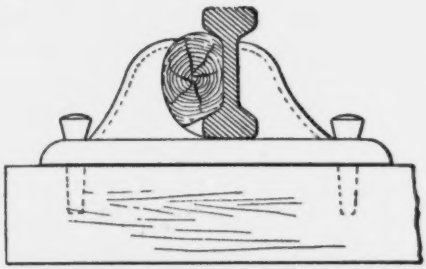
In order to properly measure the problems which confronted Wolhaupter as an inventor, as an engineer, and as a practical railroad man,—to properly get the perspective of the prior art and to determine whether Wolhaupter's efforts were clearly those of an inventor or merely of a skilled mechanic, we first of all briefly review the evolution of track construction in this country.

Early Conditions.

At first there were no rails. The wheels of the locomotive and of the cars rolled over flat pieces of strap iron, fastened lengthwise on long timbers or stringers placed end to end, longtitudinally of the track bed. Then the flat strap iron was discarded and rails were placed upon the long timbers. These timbers were presently abandoned. With the disuse of stringers and the introduction of the rail, came the wooden ties laid fifteen to twenty inches apart, cross-wise of the track.

The earlier track construction was, of course, in the days of small beginnings, and soon became too light for the traffic. Later the rolling mills, with increasing experience and practice, were able to turn out rails of a heavier section, but still of more or less crude form. In many cases, the section or shape

of these rails were such that they could not be directly supported or held in a vertical position, except through some specially formed device of cast metal, which formed a seat or what was commonly known as a "chair." Many of the rails were of dumb-bell form—the idea being to reverse their position when the top surface first exposed to the traffic had become worn. The Thompson patent, No. 305,864, is an illustration of the typical rail chair of the period mentioned.

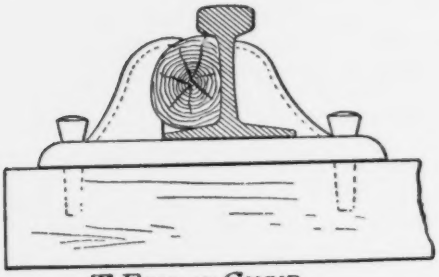


THOMPSON'S PAT. #305864
RAIL CHAIR

(Vol. 1, p. 161.)

"As the makers of rails became more expert in the rolling of the same they were enabled to form the same with flat bases or seats so that these seats could be placed directly on top of the ties and thus the chairs were dispensed with except at the ends of the rails.

"Still later when the steel rail was used and the rolling mills had become expert in rolling difficult sections, the chairs at the ends of the rails were dispensed with and the ends of the rails were fastened together with straps or fish-plates.



T-Rail in Chair

"In the use of the chairs at the ends of the rails it was discovered that the joint ties under these chairs were *battered out and worn much more quickly than the other ties* and it was for this reason largely that they were abandoned and means found for connecting the ends of the rails with fish-straps.

"Referring to the ties commonly used in this country it was soon discovered that the best all around tie was of white oak and whose *average life* was limited by decay to about *eight years;* and gradually the roads in this country came to use the white oak tie almost universally. It formed a strong and firm seat for the rail and also a substantial and solid surrounding medium for the spike.

"The use of oak ties became so extensive that they became scarce and the price increased rapidly making it very difficult in many cases for roads to obtain supplies.

"It was at this time that the Tie Plate made its appearance. The Tie Plate was primarily designed to form a metallic surface for ties of softer wood than oak, notably such woods as cedar, tamarack, pine, spruce, redwood, etc., immediately under the base of the rail.

"It was found in the use of these soft woods for ties that the *life was limited by the abrading and crushing action of the rail and not by decay,* and a number of these woods had a longer natural life in the ballast or track than

the white oak, notably the white cedar, whose average life was twelve years provided it was preserved from the aforesaid abrading or cutting action of the rails.

"Furthermore, these ties, being of a soft material, did not form so substantial a surrounding medium for the spike as the oak and consequently the track would widen gauge more readily with their use than with the white oak. In the use of soft ties without Tie Plates, the common practice was to renew part of the ties in the track from year to year, leaving the other ties in track partially worn, some greater than others, according to the time they had been in track. This left the tie supports for the rail of unequal heights and of unequal supporting ability, made a very uneven track and a dangerous track, for high speed and heavy trains.

"The Tie Plate changed all this.

"By the use of it *the life of the tie* in track *was extended* to its natural life of decay which, for instance, in connection with the cedar tie was *twelve years*, as compared with the *eight years* of the oak tie. The Tie Plate formed an even bearing surface and supporting surface on all of the ties whether recently put in or whether they had been in one or several years. Furthermore, with the oak tie and no Tie Plate, it was the one single outside spike on each tie which prevented lateral movement of the rail and the widening of the gauge of the track, whereas by the use of the Tie Plate both the inside and outside spikes on each tie, passing through the plate, were tied together by the plate so that both spikes resisted the outward movement of the rail and doubled the resistance to lateral movement of the single spike without a Tie Plate." (Wolhaupter Dep., Vol. 1, p. 163.)

Distinction Between the Tie Plates and Rail Joints.

There is much discussion in the record and in our adversaries' brief, intended to show that a rail joint or rail chair is so related in construction and configuration to a Tie Plate that it may be considered as part of the same art and that, therefore, prior rail joints or rail chair patents may be properly relied upon as anticipatory of the Wolhaupter patents in suit. Whether this be true or not, there is, nevertheless, a fundamental and vital distinction between a Tie Plate on the one hand and a rail chair or joint on the other hand, which inheres without regard to the particular construction, design or configuration of the article.

It is this: A rail joint or chair is necessarily physically secured to the rails; it thus partakes of any motion given to the rails by the action of the rolling stock over the latter. A Tie Plate, on the other hand, is not secured to the rail. It is secured to the tie. It becomes part and parcel of the tie and is immovable with respect thereto.

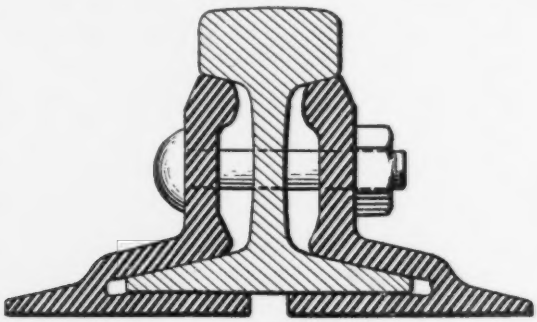
All relative motion, therefore, created by the passing of the rolling stock over the rail, takes place between the base of the rail and the Tie Plate—there being no relative motion between the rail and the rail chair on the one hand or between the Tie Plate and the wooden tie, on the other hand.

> "In the use of chairs at the ends of the rails, it was discovered that the ties under these chairs were battered out and worn much more quickly than the other ties and it was for this reason, primarily, that they were abandoned and means found for connecting the ends of the rails with

fish straps." (Wolhaupter Dep. R., Vol. 1, p. 162; see also Wallace, Q. 56, R. Vol. 2, p. 566; X-Q. 172, R. Vol. 2, p. 577; Bell, Q. 42, R. Vol. 1, p. 92; Quincy, Q. 10, R. Vol. 1, p. 151; Eber, Q. 18, R. Vol. 2, p. 631; Miller, Q. 17, R. Vol. 2, p. 692; McElroy, Q. 4, R. Vol. 1, p. 58, and X-Q. 87, R. Vol. 2, p. 781.)

"In the use of chairs at the ends of the rails it was discovered that the joint ties under these chairs were *battered out and worn much more quickly* than the other ties, and it was for this reason largely that they were abandoned and means found for connecting the ends of the rail with fish straps."

(Wolhaupter Dep., R. Vol. 1, p. 163.)



COMPLAINANT'S EX. No. 164.
CONTINUOUS RAIL JOINT.

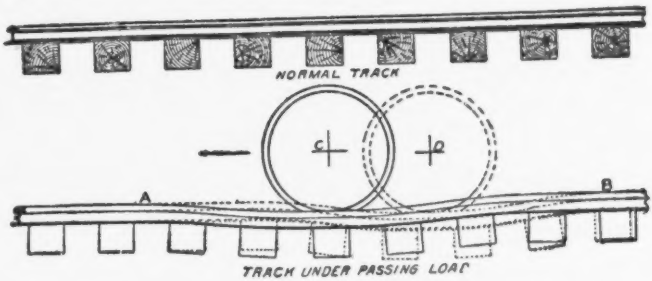
(R. Vol. 2, p. 870.)

It appears in the record that, as the rail acts as a hammer and delivers a blow to the wooden tie sufficient to compress it or cut it every time a trainload passes over the rail, a *much heavier blow* is delivered to the tie by the heavy chunk of metal called a chair or joint or support. Hence in many instances,

good railroad engineers require that Tie Plates be used on all ties including those which support rail joints. (See Buck photographs, R, Vol. 2, p. 872; Thompson, Q. 53, R. Vol. 2, p. 599; Layfield, Q. 14, R. Vol. 2, p. 608; Buck, X-Q. 32, R. Vol. 2, p. 627).

Destruction of Track and Wood Ties.

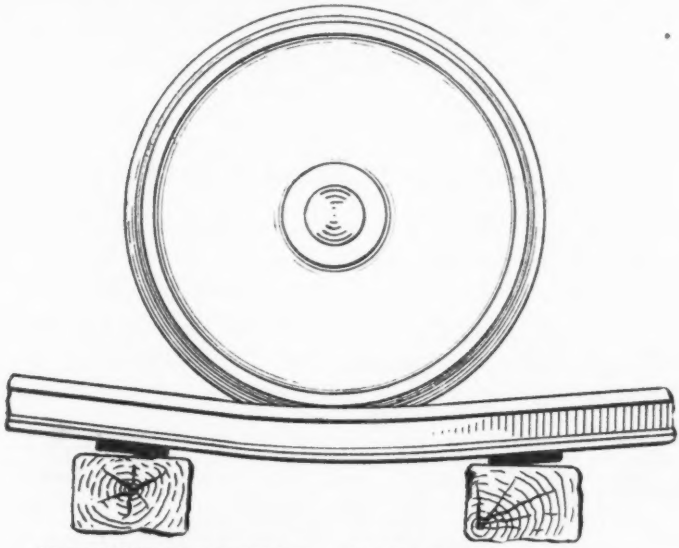
The effect of the constant passing of heavy train loads over the rails and other factors were interestingly considered in the deposition of the witness, E. H. Bell, beginning on p. 93, Vol. 1, of the record. A normal track, i. e., when first laid—is illustrated in the record (Ex. No. 29).



"Exhibit No. 29," Illustrating Wave Motion of Track. (R. Vol. 1, p. 94.)

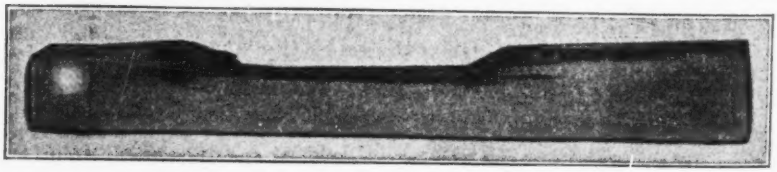
In this exhibit, the circular dotted line represents a single wheel of a train where the engine or the car load may weigh, 60, 100 or 150 tons. Every unit of weight comes at one time or another on each individual part of the rail as the wheels pass over it, and, therefore, this great weight presses both the

rail and the tie down into the roadbed as each wheel of the train passes over this point.



ILLUSTRATING WEIGHT ON RAIL, PRODUCING "WAVE-MOTION."

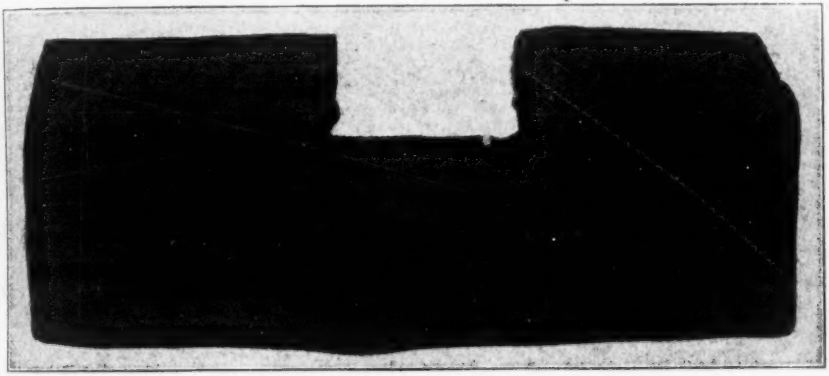
Thus the rail rises and falls alternately and is given a vertical, undulating or wave-like movement as one part and then the next is depressed by the wheels and then released. This is called in railroad parlance "wave motion" of the rail. It produces track destruction both by the compressing and cutting action of the rail.



"EXHIBIT No. 28," SHOWING COMPRESSION TIE-WEAR.

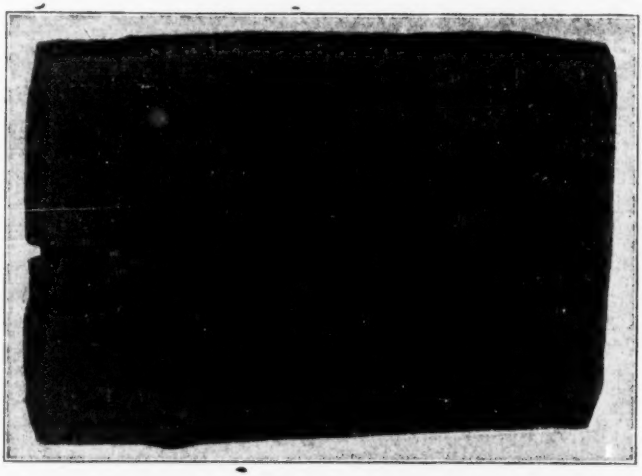
(R. Vol. 1, p. 93.)

Mr. Bell pointed out that Tie Plates will prevent tie-wear that is caused by *compression;* that is, where the ties are cut into by the mere weight of the loads which rest upon them (first Par. R. Vol. 1, p. 93). Also, that it will eliminate the wear caused by the *sawing action* of the base of the rail due to the "wave motion."



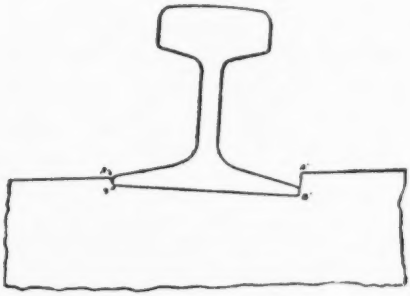
"EXHIBIT No. 34," ILLINOIS CENTRAL CYPRESS TIE SHOWING TIE-WEAR. (R. Vol. 1, p. 99).

It was observed that in many cases the ties were not being destroyed by rotting as rapidly as they were by the cutting and abrading action of the rail base; that although the life of a tie *should be about eight years,* many ties were in track *only one and two years,* and sound so far as rotting and natural decay were concerned, were absolutely ruined and rendered unfit for further service by reason of the destructive action of the rail base.



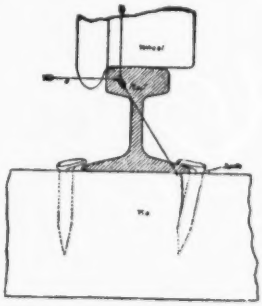
"Exhibit No. 36," Pine Tie Showing Tie-Wear, Two Year Service. (R. Vol. 1, p. 100.)

In addition to this great *downward pressure* and *crushing strain* of many tons, there is also a great lateral pressure. The swaying of the train back and forth as it proceeds under high speed is augmented by its load. This great lateral thrust is materially increased, by centrifugal force, when the train passes over curves in track. This produces rail *canting* and *spike* wear as well as spike shifting. Sometimes the rails would not cut straight down into the tie, as shown in Exhibit 34, but would only partially on one side and would cut deeper on the other, thus canting or tipping the rail, as illustrated in Exhibit No. 39 (R. Vol. 1, p. 102). This destroys also the "gauge" of the track, by spreading the rails or overturning one of them.



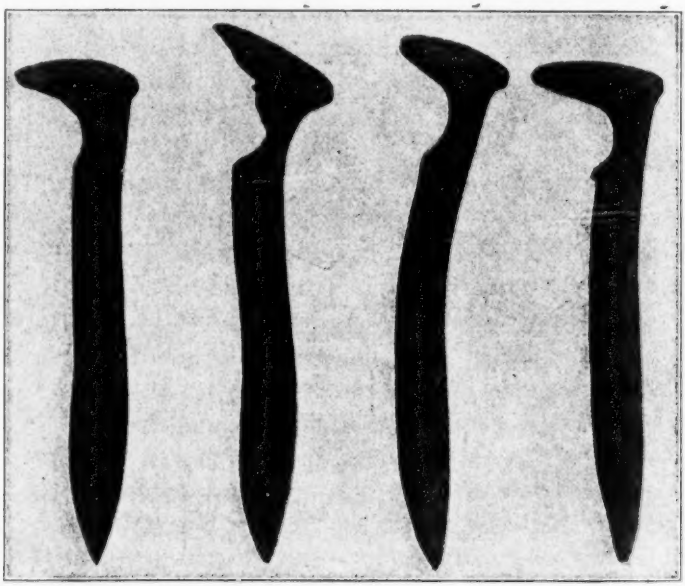
("Exhibit No. 39," R. Vol. 1, p. 102.)

The side thrust on tangent track also pushes the outer spikes away from the rail. This would leave a gap or enlarged spike-hole in the tie (shown in Exhibit 40, R. Vol. 1, p. 103), usually resulting in loosening the rail, widening the gauge and permitting rail spreading, turning, and a wreck.



Not only would the spikes be displaced or shifted, but the wave motion produced such a sawing and cutting action upon the throats of the spikes as not only to weaken the latter as a rail-locking device, but to frequently result in severing the spike-head from the body thereof.

The foregoing will give to the court only some of the practical problems which Mr. Wolhaupter started out to solve. In producing a device eliminating these serious defects in track construction he certainly produced "beneficial results" by which the work of mankind was actually advanced.



"Exhibit No. 42," Illustration Showing Spike Wear. (R. Vol. 1, p. 104.)

Tie Plate Requirements.

A statement issued by the Roadmaster and Maintenance of Way Association, formulated at its meeting in Chicago held in 1906, contained the following specification for a model Tie Plate:

> "*First.* Should be so constructed as to make itself a part and parcel of the tie; in other

words, fasten itself to the tie with the least amount of detriment to the fibers of the wood.

"*Second.* Should be so constructed as to prevent the spreading of the track, assist the spikes and other work.

"*Third.* Should be so constructed as to give the greatest amount of buckling strength.

"*Fourth.* Should have flanges of sufficient length to give frictional resistance and sufficient body to prevent the buckling."

(Page 15, Green Catalogue, "Complainant's Exhibit No. 22," R. Vol. 2, p. 939.)

To these the witness, Bell, added:

Fifth. To prolong the life of soft wood ties by preventing the destruction of the fibres by the sawing action of the rail.

Sixth. To prolong the life for years of ties already rail eaten to some extent by proper adzing and then using Tie Plates under the rail.

Seventh. To give a firm seat to the rail and hold it in an upright position, thereby maintaining a perfect surface.

Eighth. To prevent spike-wear, that is, the cutting of the throats of the spikes.

Ninth. To prevent rail canting. (Bell, R. Vol. 1, p. 92-93.)"

A Tie Plate interposed between the rail and the tie to overcome these serious troubles, which resulted in loss of life and the destruction of valuable property, not only became a necessity, but it had to fill certain definite requirements. These are well set forth in the very able deposition of plaintiff's expert witness, Major Charles R. Miller, of Cleveland, Ohio (R. Vol. 2, p. 641). Particular attention is called to his answer to the question as to what are the essential characteristics of a Tie Plate (Q. 16, R. Vol. 2, pp. 689-692).

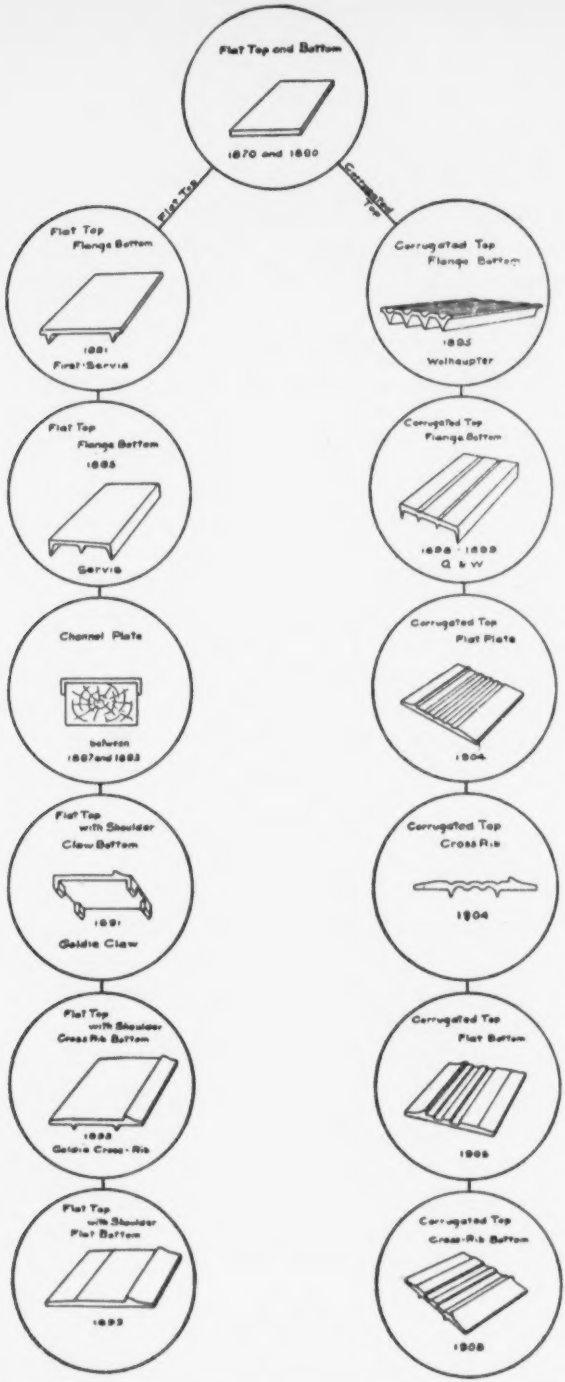
Flat-Top Plates.

We have heretofore stated every commercial plate that appeared on the market from time to time, prior to the introduction of Wolhaupter's corrugated Tie Plate, had a straight flat top or a substantially flat top, and that the first Wolhaupter patent in suit, therefore, marked a *dividing line* in the art.

> **"There were no corrugated top Tie Plates manufactured, sold or used prior to 1895."**
>
> (Hawley, R. Vol. 1, p. 43.)

In this connection, the deposition of Mr. Bell is very illuminative, disclosing as it does the practical and commercial evolution of the Tie Plate from the first form which appeared in the art in 1870, i. e., a plate having a flat top and a flat bottom surface.

The Servis plate of 1881, and its modification in 1885, the channel plate (1887-1893), the Goldie claw plate (1891), the Goldie cross-rib (1892), and the "shouldered" plate (1893) all had flat top surfaces, as will be seen by reference to Exhibit No. 56.


Flat Top and Bottom
1870 and 1880
Flat Top
Corrugated Top
Flat Top
Flange Bottom
1881
First Servis
Flat Top
Flange Bottom
1885
Servis
Channel Plate
between
1887 and 1893
Flat Top
with Shoulder
Claw Bottom
1891
Goldie Claw
Flat Top
with Shoulder
Cross Rib Bottom
1893
Goldie Cross-Rib
Flat Top
with Shoulder
Flat Bottom
1893
Corrugated Top
Flange Bottom
1895
Weihaupter
Corrugated Top
Flange Bottom
1898 - 1899
G. & W.
Corrugated Top
Flat Plate
1904
Corrugated Top
Cross Rib
1904
Corrugated Top
Flat Bottom
1905
Corrugated Top
Cross-Rib Bottom
1908

"Exhibit No. 56," Illustration Showing Tie-Plate Development.

"The next change in the rail bearing surface or top of the Tie Plate was to make the plate *with corrugations* on its top or rail bearing surface. This plate was first manufactured and sold by the Railroad Supply Company.

"As I have previously stated, the wave motion of the rail under traffic acts on the top of the Tie Plate the same as the wave motion of the rail on the top of the tie. In the case of the flat top plate there is no outlet for sand or grit or other foreign material to escape between the rail and the top of the plate.

"I would further explain that the wave motion of the rail sucks sand and grit between the bottom of the flange of the rail and the top of the plate and as stated in the case of a flat top plate there is no way for this foreign material to escape and the wave motion of the rail acting on the top of the plate grinds it out."

(Bell, R. Vol. 1, pp. 106-7.)

The Servis Tie Plate.

At the time the Wolhaupter patented plate was brought out, the Servis flat top Tie Plate was the best plate then on the market (Vol. 1, p. 170, Q. 33). There were practical objections to the Servis plate, in the first place, in that the Servis plate was being rapidly worn by the *action of the sand* which accumulated on top of the plate and underneath the rail, which served as an abradant to rapidly reduce the plate in thickness and in strength. The result was that the Servis plates soon *buckled or turned up* at the edges of the rails.

To prove to the railroads that the Wolhaupter plate of corrugated form, giving the *greatest amount* of strength with the *least amount of material and* relieving the top surface of the abradant in the form of sand and grit by placing grooves for said abradant to fall into, was better than the Servis plate, tests were made by railroad officials. Exhibit No. 48 shows the result of one of said tests, the Servis plate is practically worn through while the Wolhaupter plate is very little worn; this, notwithstanding the fact that the top surface of the Wolhaupter plate supporting the rail is only about a third or a quarter of the area of the top surface of the Servis plate supporting the rail. The patentee testified that as a

> "result of these tests, the Wolhaupter plate, having the grooves, *practically drove out of use*, the flat top Servis plate and other plates of a similar character."
>
> (Wolhaupter, R. Vol. 1, p. 168.)

"EXHIBIT No. 48," SHOWING RAIL-WEAR ON FLAT TOP TIE-PLATE. (Vol. 1, p. 109.)

The undisputed evidence in this record relating to some of the problems presented and difficulties experienced with the plates on the market were recited at some length by the patentee, see page 170, Rec. Vol. 1.

VI.

THE PATENTS IN SUIT.

Wolhaupter First Patent, No. 538,809.

In this patent, dated May 7, 1895, only one claim, the eighth, is involved. This claim is to a broad invention. The distinguishing feature of Wolhapter's "concept" and of the invention covered by this claim, consists in the *series of relatively narrow supporting flanges or surfaces* suitably spaced apart. In other words, a *"corrugated"* top surface for the plate, as distinguished from a flat or plain top surface.

This "corrugated" top is not only the *most* important disclosure of the patent, **but it turned out to be the most important improvement in the entire art.** All Tie Plates made prior to Wolhaupter were flat top plates and nearly all of plates made since 1895 were "corrugated" top plates. Wolhaupter's patent, as before stated, marks the dividing line in the art.

The only claim of this patent involved in this litigation is the eighth, which reads as follows:

> "8. A railway Tie Plate formed on the under side with devices more or less sharpened, adapted to engage and penetrate the tie, and on its upper side with a series of flanges on which the rail rests, substantially as described."

(Rec. Vol. 1, p. 12.) This claim, it will be observed, covers in combination but *two* elements, (a) lower ribs and (b) supporting flanges in series.

Wolhaupter calls attention, in his patent specification, to what is referred to in this record as the "arch and girder" construction. He says (Pat. l. 79, p. 1; R. Vol. 1, p. 12) that the Tie Plate is "truss-shaped," and in line 92, *et seq.*, he says:

> "It will be observed that by this form of plate there is much less opportunity or chance of buckling than with the ordinary flat plate, since each point where the rail rests upon the plate is supported and trussed by metal which is more or less on edge instead of on its side, thereby forming for each resting point of the rail two girders c^1 *joined at the apex by top flanges* c^4 *where the rail rests.* By the above construction, also, the wood between the flanges c, c^1, c^2, c^3" (the under more or less sharpened ribs) 'will, because of the sloping of the approaching sides of the flanges, be compressed between the flanges, thereby greatly aiding in sustaining the weight upon the plate, and also in excluding moisture from the wood under the plate.'

CROSS SECTION FIRST
WOLHAUPTER PAT-IN-SUIT
#538,809-MAY-7-1895

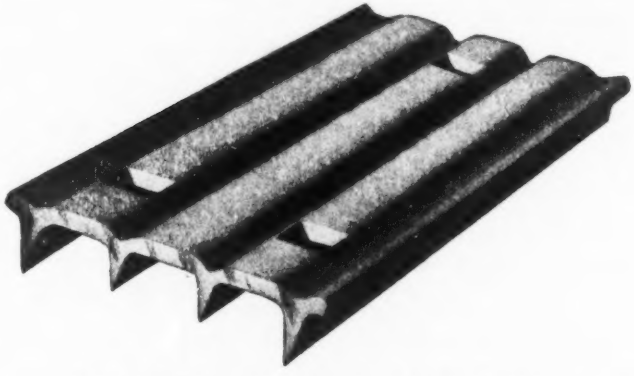
"A form of plate such as I have just described is also of material advantage in that *I am enabled to make it much lighter in weight.* In this construction of plate *with the same amount* of material as is ordinarily used in Tie Plates, a *much stronger plate is obtained.* Heretofore it has been a commercial necessity in order to get the price of plates where they could be sold for use on the cheaper grade of ties, to reduce and diminish as far as possible the material and consequently the weight of the plate. The result has been that with the plate flat and thin it has buckled when the rail pressure has been brought on it, thereby damaging the tie as well as rendering the plate useless as a bearing for the rail; but in my construction since the points where the rail rests are *supported by metal more or less in upright* position the plate is greatly strengthened without addition of weight. So also by a construction as above the top of the plate where the rail is seated *comprises a series of flat portions with a series of depressions* between, so that while there is abundant wearing surface between the rail and the plate, there is space for sand, cinders, etc., to work out. Again, these depressions permit the draining off of water and moisture so that in cold weather the top of the plate, particularly the space between the rail and plate is not covered with ice and the friction between the rail and plate thereby either lessened or obviated entirely."

(Wolhaupter Pat. 538,809, line 92, p. 1, to line 32, p. 2; Rec., Vol. 1, p. 12; see McElroy X-Q. 45, Rec., Vol. 1, p. 72.)

Major Charles R. Miller, an expert witness, in speaking of the first Wolhaupter patent, said:

"*The projecting devices* on the bottom of the plate, more or less sharpened, perform the function of and provide additional means for attaching the plate to the tie and being more

or less sharpened they readily penetrate the tie by the weight of the traffic. They also perform the additional function of *assisting and resisting lateral strain* and in thus attaching the plate to the tie they also *co-operate* with the spikes which pass through the plate and provide additional means of resisting the lateral thrust of the rails on the spike, and *serve to distribute this resistance*, force or power to the *entire surface* of the plate.



"The *flanges* on the top of the plate perform the dual function of *furnishing bearing surfaces* to the tie flange and what I would *term a bite to resist the lateral thrust* of the rail and they also at the same time prevent the *grinding and wearing effect* upon the plate produced by the sand and dust incident to the traffic. They also prevent the action of rust upon the plate for the reason that any water is carried off from the plate by the grooves.

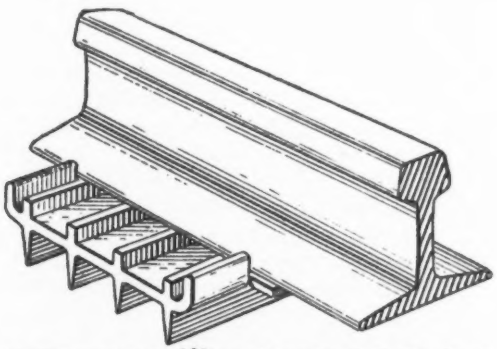
"These projecting flanges while they *resist the crushing and lateral strain*, have a tendency to keep the projecting devices on the bottom of the plate in direct contact with the tie and at the same time co-operatively enhance the resisting action of the plate and all the parts thereof against lateral strain."

(Miller Dep., Rec., Vol. 2, p. 645.)

Wolhaupter Second Patent, No. 691,332.

The device illustrated, described and claimed in this second Wolhaupter patent is to be considered as an improvement upon and a carrying forward of the invention of the first patent in suit No. 538,809. In the specification, lines 13 to 19 of page 1, the patentee, referring to the earlier patented construction, states:

> "It has been found in the use of Tie Plates for railroads that there is a material advantage in providing on the upper side of the plate one or more flanges on which the rail base can rest so that channels or depressions are provided between the rail base and the body of the plate proper"; and then proceeds to state as the improvement:
>
> "My invention has for its object, the production of a Tie Plate which, while incorporating this feature of flanges on the upper side for sustaining the rail, will have the *flanges on the lower side so arranged and disposed that there is the least liability of the plate buckling.*"
>
> (Wolhaupter Pat. No. 691,332, Rec. Vol. 1, p. 16.)



IMPROVED WOLHAUPTER PLATE
AS SHOWN IN SECOND PAT-IN-SUIT
691,332 JAN-14-1902

The first three claims of this patent only are in issue.

> "1. A railway Tie Plate provided on its upper side with one or more flanges on which the rail may rest or by which it is directly sustained and on the under side with one or more tie-engaging flanges extending parallel with the upper flanges and directly beneath the latter, substantially as described."

Claim 2 is substantially the same as Claim 1, with the additional feature or limitation, namely, that the lower ribs or flanges are "sharpened to permit them to readily enter the tie."

Claim 3 is substantially the same as Claim 2, with the still further limitation, that on the upper side of the plate there is provided, "an additional flange or flanges extending above the plane of the rail sustaining flanges and adapted to receive the lateral thrust of the rail."

The improvement consists in so arranging or locating the ribs or flanges on the lower side of the plate as to be *"directly or substantially beneath those on the upper side."*

By this construction, a Tie Plate is provided wherein the rail is sustained above the body of the plate by flanges on the upper side of the plate and by locating the tie engaging flanges or ribs directly beneath the upper flanges, the *"weight will be sustained at the points where there is the greatest pressure on the plate."*

(Wolhaupter Pat. No. 691,332, page 1, Spec., Lines 77-84, R. Vol. 1, p. 16.)

The patentee on the witness stand, comparing the first and second patents in suit, made the following statement:

> "In the Wolhaupter plate as generally designed under patent No. 538,809, these grooves come directly over the flanges and the rail is supported on the plate intermediate of the flanges below. The flanges below form piers or abutments and largely support the plate, and the *bearing portion* that the rail *rests on is the crown of an arch between them.* In applying the load from the rail to the crown of this arch the load would be distributed to the two flanges and in that respect would be considered an economical and engineering design.
>
> "In the Wolhaupter plate as generally designed under the patent No. 691,332, these grooves come directly over the spaces between the flanges and the rail is supported immediately on the top of the flanges, there being no arch between the flanges and consequently very little tendency to compress the wood fiber."
>
> (Wolhaupter Dep. X-Q. 192; R. Vol. 1, p. 188.)

Complainant's expert, Major Miller, in discussing this second Wolhaupter patent in suit, said:

> "It is apparent, therefore, from the inventor's statement of the objects and purposes of his invention that the placing of the *projecting flanges on the top and bottom of the plate in the same line brings them in line with the crushing pressure* and that their resisting force is enhanced due to the fact that the pressure is thus applied in line through the projecting flanges on the top of the plate and the projecting devices on the bottom of the plate and, thus located in line, they co-operatively afford additional resistance against lateral strain throughout the plate and all its parts."
>
> (Miller Dep., R. Vol. 2, p. 646.)

In the plate of this second patent, the upper and lower girders are placed vertically in line with each other, thus forming a single girder of *double thickness. Thus the girder presents its edge to the load* that rests upon the plate. The plate, as a whole, had a much greater resisting power, and consequently, any tendency to buckle was wholly eliminated.

Moreover, when the upper flanges and the lower ribs or flanges are thus located in line, therefore affording a greater resistance both to the crushing pressure against the wood and the tendency of the plate to buckle, it is clear that the plate has less tendency to yield to the movement of the rail. It thus clings to the rail base as well as to the tie, all the more firmly. The parts thus arranged "cooperatively afford additional resistance against lateral strain throughout the plate and all of its parts" (R. Vol. 2, p. 646, Miller Dep.).

The third claim of this second patent includes the rail abutting shoulder. This element is recited as "an additional flange or flanges extending above the plane of the rail sustaining flanges and adapted to receive the lateral thrust of the rail." Without these rail-abutting flanges, the lateral thrust of the rail will be resisted only by the frictional contact of the bottom of the rail on the plate and by the neck of the spike that is driven into the wood through the plate to hold the plate to the tie. When, however, the plate is provided with the flange or shoulder against which the edge of the rail base may abut and which shoulder or flange resists the lateral strain or thrust of the rail, it will be apparent that

any working or sawing tendency of the edge of the rail base against the throat of the spike will be prevented. It is likewise true that the lateral strain or thrust of the rail will be resisted by the co-operative means employed. Thus all of the parts come into action in resisting the lateral strain.

Wolhaupter Third Patent, No. 721,644.

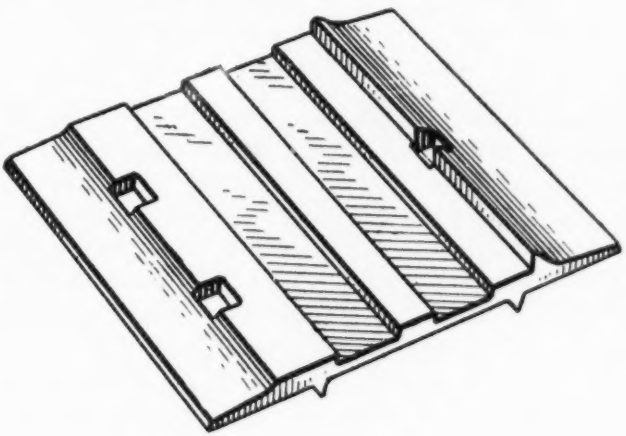
The invention of this patent, a further improvement upon Wolhaupter's first patent, will appear from Claims 7 and 9.

> "7. A Tie Plate provided in its rail supporting surface with transverse grooves or channels, and at one margin of said supporting surface with a transverse rail abutting shoulder.
>
> "9. A Tie Plate provided in its rail supporting surface with transverse grooves or channels *reaching to the edge of the plate*, and at one margin of said surface a transverse rail abutting shoulder."
>
> (Wolhaupter Pat. No. 721,644, Rec. Vol. 1, p. 21).

The only difference between these claims is in the italicized limitation in Claim 9. The patent drawing showings some modifications in which the grooves extend only from the center towards one margin. It was evidently the intention of the inventor to cover by Claim 7 a construction in which the transverse grooves might not reach to the edge of the plate and to cover by claim 9 a construction in which the grooves or channels should extend all the way across from side margin to side margin of the plate.

In lines 20 to 28, page 1, of the specification, the inventor says:

> "This invention relates to improvements in railway Tie Plates and embraces among others, the following objects: * * *; *Third.* The manufacture of a Tie Plate with the least amount of metal consistent with durability and strength, with a view of cheapening the cost of manufacture, and, *Fourth*, the manufacture of a Tie Plate with such configuration upon its surface that, water, sand or other deleterious material will be drained off or away from the same."
>
> (Wolhaupter Pat. 721,644, Rec. Vol. 1, p. 20.)



"EXHIBIT No. 14," COMPLAINANT'S TIE PLATE.

(Rec. Vol. 1, p. 41.)

In the use of the Tie Plates of Wolhaupter's first patent, having grooves running across the longitudinal axis of the rail (designed to prevent sand wear), the edge of the plate lay outside the side margin of the rail base. It was found, after ex-

tended service, that while they prevented sand wear by the catching and holding the sand, the grooves also caught brine which dripped from refrigerator cars, that on some roads were extensively hauled. The brine was thus drained towards the center of the plate, and had the tendency to rapidly eat up the plate beneath the rail.

> "To overcome this objection and to make a plate in which the grooves beneath the rail were prevented or would be prevented from carrying the brine under the rail base, the plate was designed in which the grooves beneath the rail base for preventing sand wear *were covered on their ends by the rail itself*, so that such brine would not drop into them and run beneath the rail causing the destruction of the plate."
>
> (Wolhaupter Dep., R. Vol. 1, p. 171.)

By placing the grooves parallel with the rail abutting shoulder, they are covered and protected by the rail base. By extending the grooves to the edges of the plate, all foreign substances such as sand or the like are free to pass through the channel or groove to the roadbed. The combination of a top shoulder with the grooves running parallel therewith, therefore, performed important results. One result of this combination was brought out in the evidence given by Mr. Wolhaupter. He said that the rail abutting shoulder:

> "comes up beside the rail flange and often extends a little bit above it forming a slight receptacle or groove into which sand and dust can collect between the flange of the rail and shoulder of the plate and this does not work away, but works down beneath the lower edge of the flange of the rail, *very badly grinding out* the rail flange and the space on the plate next to the shoulder, and this under certain

conditions is so bad that I have seen plates of this type that did not have any grooves with their shoulders largely worn through or off. By *placing a groove on the top of a plate near the shoulder some of the wear, sand-wear, can be avoided*" (Rec. Vol. 1, p. 191).

Referring to this third patent of Mr. Wolhaupter's, Major Miller, the expert, has said:

"By providing or arranging the grooves transverse the upper surface of the plate and extending from edge to edge thereof the draining of the Tie Plate is more effectively accomplished *because of the suction of the train in passing over the plate is transverse the plate and thus its force is utilized in clearing the plate of sand and dust and the grooves provide a means for the ready passage thereof from the plate.* At the same time the flange of the rail completely covering these transverse grooves forms a covering which prevents rain or brine from entering the grooves."

(Q. 5, R. Vol. 2, p. 648.)

When asked concerning his opinion as to whether it required merely the exercise of mechanical skill and judgment for its production, Major Miller said:

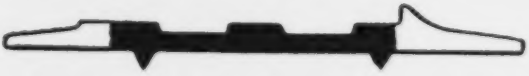
"I am of the opinion that it required inventive genius to produce the Tie Plate shown, described and claimed in the 7th and 9th claims of said patent No. 721,644. Certainly Mr. Wolhaupter did not merely exercise mechanical skill and judgment because there was *nothing in the prior art to suggest* such a Tie Plate or *to guide* him in its production."

(Miller Dep., Q. 20, R. Vol. 2, p. 694.)

Resume' of Wolhaupter's Three Inventive Concepts.

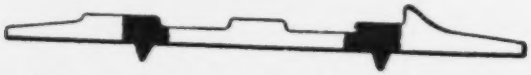
From the foregoing, it must be manifest that the first Wolhaupter patent covered in Claim 8, the broad, generic "concept" or "happy thought"—a departure from the *flat* top, broad and single rail bearing surface of the prior art. In lieu thereof, Wolhaupter, as the distinguishing feature of his invention, provided a corrugated or interrupted rail bearing surface, consisting of a "series" of *relatively narrow* "flanges," suitably spaced apart. This "series of flanges" element of his claim—is combined with the "more or less sharpened devices"—the under ribs, which "enter and penetrate the tie."

The feature of an interrupted rail bearing surface, a series of supports—or as it was promptly named by the trade—a corrugated top—turned out to be *the most important single improvement in the entire Tie Plate art.* All plates prior to Wolhaupter's were flat top plates and since 1895, nearly all (77% say the witnesses) were "corrugated" top plates. **Wolhaupter's patent in 1895 thus marked the dividing line in the art.**



This sketch graphically illustrates not only the invention of Claim 8, but also the form of the Tie Plate rolled by the Elyria Company, sold to the Santa Fe Railroad by the Hart Company and Wood, and also sold, *pendente lite*, to the Santa Fe by the Railroad Supply Company to the extent of over eighty-four thousand tons.

Wolhaupter's second patent is directed to a limited and specific improvement, upon the broad invention of Claim 8 of his first patent, in that the bottom tie engaging ribs were located *"directly beneath"* the upper flanges, thus giving an "on edge" construction that produced additional strength to the plate as a whole.



In this sketch the blackened portion illustrates this improvement. The two elements co-act in that the tie engaging under ribs are "in line" with the crushing pressure of the load to be carried. The resisting force is augmented by the pressure thus applied vertically through a line drawn vertically through the top rail bearing flanges and the under tie engaging ribs. In addition, this construction strengthens the plate *at the point of greatest* strain, thus serving not only to hold the plate firmly to the tie but also to afford additional resistance against lateral strain throughout the plate and all its parts.

The Seventh Circuit Court held with respect to the second Wolhaupter patent, that "nothing in the prior art anticipated this particular construction"; that the first Wolhaupter patent was the "nearest reference"; that the second patent was manifestly an advance and an improvement thereon: and stated the issue in the following language:

> "But the question here, as was the case with the first patent, is one of invention, whether it involved more than mechanical skill to perceive that such a general strengthening principle might be brought into the relationship between the elements of a Tie Plate" (that of his

> first patent) "and then to practically organize the new structure." (Opinion, Hart case, R. Vol. 3, p. 1422.)

The court was led to:

> "resolve any doubt that might be created by the apparent simplicity of the step, in favor of the validity of the patent,"

for the same reason that this court sustained the Barbed Wire patent (143 U. S. 275) namely: the "prompt acceptance of this idea," and the "commercial success to which it contributed"—adding as an additional reason, "the fact that seven years elapsed after Wolhaupter had disclosed the general combination before any of the numerous engineers interested in railway construction, perceived the possibilities of such relationship." This principle has often been announced by this court, as for example, in the case of *Potts* v. *Creager*, 155 U. S. 597, where it was said:

> "The decisive answer is that with a dozen and perhaps hundreds of others laboring in the same field, it had never occurred to any one before."

The third Wolhaupter patent involves another improvement or carrying forward of the earlier concepts. It covers in Claims 7 and 9, a rail abutting shoulder located in such juxtaposition to the grooves or corrugations in the top (and formed by the series of flanges) that sand and other foreign substances may readily work into the grooves. The limitation in Claim 7 is that the shoulder shall be *parallel* to the grooves because it must be located *"at one margin"* thereof, *i. e.*, side margin. The specific language of Claim 9, in addition to the lo-

cation of the shoulder "at one margin" is that the channels or grooves shall extend to the "edge of the plate." In both claims, also, there is the specific limitation that the channels shall be "transverse" of the plate and that the rail abutting shoulder shall also be transversely located.

This sketch brings out by the use of the heavy or blackened portion, the subject-matter of this third patent, *i. e.*, the location and juxtaposition of the grooves and the shoulder. So far as this combination and specific invention is concerned, it matters not whether the bottom of the plate be plain, as in the Harriman plate (*supra*, p. 64) or be provided with tie engaging devices as in the infringing plate sold to the Santa Fe Railroad.

The very greatest strain on a Tie Plate is at the shoulder, where buckling will occur, if it occurs at all, in a given plate, and where the plate wears away most easily. By providing the shoulder and groove parallel, the tendency to accumulate sand, grit and all emery-like grinding and wearing away of the plate at the place where such action would most naturally follow, is eliminated, and both wear and breakage as well as buckling of the plate at the one place where it is most liable to occur are entirely avoided.

Respecting this patent (the third Wolhaupter), the Seventh Circuit Court of Appeals observed:

> "The invention does not consist in putting a rail-abutting shoulder upon a Tie Plate" (as

erroneously held by the Sixth Circuit Court of Appeals).

The concession that the prior art showed rail abutting shoulders to be old, is of no consequence, manifestly, where such a shoulder is but *one* element of the *combination* claim under consideration, and where the question at issue is whether or not it required invention to produce the *specific* and *limited combination.*

> "No prior structure of the practical or of the paper art, either meets these limited claims or suggests, out of all possible relationships of the elements, the particular relationship here claimed. For the reasons stated in connection with the other patents, we are unable to find that the defense of non-invention is properly sustained."
>
> (Opinion Hart case, R. Vol. 3, p. 1423.)

These conclusions are *all the more forceful because rendered after* the contrary findings had been announced by the Sixth Circuit Court of Appeals in the Elyria case. The finding of the validity of the third Wolhaupter patent recalls to mind what this court said in its decision in the Barbed Wire case, *supra*, "In the law of patents, it is the last step that wins."

VII.

UTILITY EVIDENCED BY LARGE SALES AND PUBLIC RECOGNITION.

Evidence adduced to show the utility of the Wolhaupter "corrugated top" Tie Plate and the large and increasing volume of sales thereof, is full and unanswerable.

In answer to the question, "To whom does the Railroad Supply Company sell Tie Plates?", Mr. Hawley, the president of that company, testified:

> "A. It would be easy to answer that question by asking what railroads we don't sell to. We have on our books at one time or another practically every steam railroad in the United States, Canada and Mexico. We have on our books six hundred or eight hundred accounts each month. The accounts vary, the same railroads not always appearing from month to month. Other railroads take the place of those that don't appear.
>
> "Our Tie Plates *are standard on most of the large railroad systems in this country.* By standard I mean that our Tie Plates are specified by the engineering department for use on their roads."
>
> (Hawley, R. Vol. 1, p. 43.)

There are over *thirteen hundred railroads* in the United States, practically all using Wolhaupter "corrugated" top Tie Plates. (See Ex. No. 58, R. Vol. 1, p. 89.)

Mr. H. S. Hawley, the president of The Railroad Supply Company, testified as follows:

> "A. Well up to December 31, 1908, The Railroad Supply Company has sold a hundred

> and forty-three millions (143,000,000) Tie Plates having corrugations on the upper surface which we claim are covered by Wolhaupter's patents. The introduction of the *corrugated top* Tie Plates had a *great deal to do with the development of the Tie Plate industry.*
>
> THERE WERE NO CORRUGATED TOP TIE PLATES MANUFACTURED OR SOLD OR USED PRIOR TO THE YEAR 1895." * * *
>
> "The corrugated plate rapidly superseded the flat top plate and the records of our company show that over seventy-seven per cent (77%) of our total business in Tie Plates has been of the corrugated top feature. The gross sale of both types of plate being about one hundred and eighty-eight million (188,000,000), seventy-seven per cent (77%) of them being of the corrugated top type."
>
> (Hawley, Vol. 1, p. 43.)

Mr. Bell, corroborating Mr. Hawley, testified that flat top plates comprised but a small proportion of this total volume. The Sales Chart (Ex. No. 57, R. Vol. 1, p. 88) shows that the sales of the flat top Tie Plates in 1890, were 341,257, increased to 7,561,-633 plates in 1895 (the year the Wolhaupter corrugated plates were introduced) and then decreased to 1,468,048 in 1908—the total of flat top plates in the nineteen years being about forty-four millions. On the other hand, the sales of the Wolhaupter "corrugated" top plate during only a portion of the year 1895, were 302,261, and increased rapidly during its first ten years, amounting in 1905, to 22,-779,626 Tie Plates, and by December 31, 1908, when the bill was filed, *the sales of "corrugated" top plates had reached the enormous sum of* 188,800,000 (Bell, R. Vol. 1, p. 86).

This Sales Chart, corrected to include 1909 sales, shows the *decrease*, year by year, of the sales of the *flat top* plates and the *steady increase* in the sales of the Wolhaupter corrugated form of Tie Plate as follows:

FLAT TOP.	YEAR.	CORRUGATED TOP.
341,257	1890	
941,059	1891	
1,554,003	1892	
1,039,637	1893	
1,291,437	1894	
4,506,724	1895	302,261
7,361,633	1896	108,784
7,202,378	1897	2,817,759
.....Records missing	1898	7,517,618
3,909,428	1899	18,521,996
2,004,707	1900	8,235,555
2,194,834	1901	9,991,759
2,765,187	1902	11,566,613
1,789,091	1903	11,131,196
2,215,416	1904	8,994,960
973,354	1905	22,779,626
1,164,292	1906	21,707,174
438,396	1907	15,626,215
1,468,048	1908	10,507,672
5,480,577	1909	39,210,595

Ex. No. 173, Chart, p. 1395, Vol. 2, opposite p. 874.

The business of the Railroad Supply Company in Tie Plates aggregated 70 per cent of the total business or supply to railroads (Hawley, R. Vol. 1, p. 45). Of this 70 per cent of the total business of the country, the Wolhaupter Tie Plates bear the proportion of 77 per cent as against 23 per cent of all other types of Tie Plates. The *demand* for and the value of this type of Tie Plate—Wolhaupter's "corrugated" top as it is called,—is thus demonstrated at a glance by the contrast between the 1895

sales (302,261) and the 1909 sales (39,210,595) and by the total of now nearly one hundred and eighty-nine million. This total for *one year* (1909), of nearly forty million corrugated top plates is approximately thirteen-sixteenths (13/16) of the total volume of flat top plates for the preceding *twenty years!*

> "The utility of the Grant patent, therefore, was not attained in the Willoughby patent. The rubber company's conduct is confirmation of this. It uses the Grant tires, as we shall presently see, not the Willoughby tires. Let it be granted that they afforded suggestions to Grant, and that he has gone but one step beyond them. It is conceded, as we have said, that his invention is a narrow one—a step beyond the prior art—built upon it, it may be, and an improvement upon it. * * * The prior art was open to the rubber company. That 'art was crowded,' it says, 'with numerous prototypes and predecessors' of the Grant tire, and they, it is insisted, possessed all of the qualities which the dreams of experts attributed to the Grant tire. And yet the rubber company uses the Grant tire. It gives the tribute of its praise to the prior art; it gives the Grant tire the tribute of its imitation, as others have done."
>
> *Consolidated Rubber Tire Co.* v. *Diamond R. Co.*, 220 U. S. 428.

This remarkable record is further emphasized by the tribute of the Santa Fe Railroad to the value and utility of the Wolhaupter patented Tie Plate. Large quantities of these plates were purchased prior to 1908 from the Railroad Supply Co. by the Santa Fe Railroad and put into use in track. Since the purchase of 5,000 tons of infringing plates from

the Hart Steel Company, the Santa Fe System has purchased from the Railroad Supply Co. and put into track *eighty-four thousand additional tons,* or 168,308,718 pounds of the *same* Tie Plates (R. Vol. II, p. 865). Some of these were purchased under a contract, dated December 3-4, 1908, spread upon the record (R. Vol. 1, p. 52).

There can be no better showing of utility than this. *Gandy* v. *Main Belting Co.,* 143 U. S. 587; *Dubois* v. *Kirk,* 158 U. S. 58. For other authorities see IX, *supra,* p. 17.

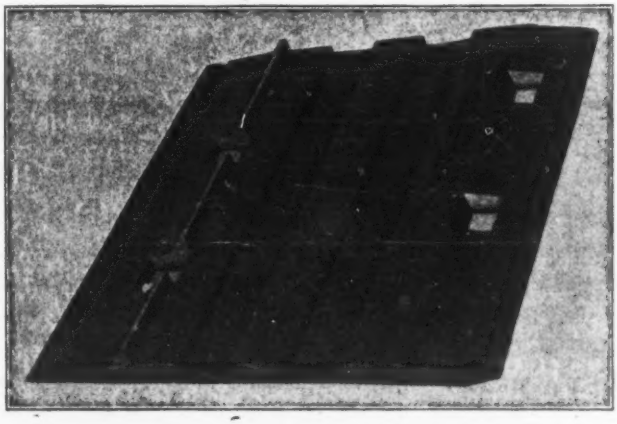
The Harriman License.

The record shows that the Harriman Lines or System, as it is called, embraced the Union Pacific Ry. Co., the Oregon Short Line Ry. Co., the Oregon Railroad and Navigation Co., the Southern Pacific Ry. Co., the Northwestern Pacific Railroad Co. and associated lines; that from 1897 to 1908, this system, particularly the Southern Pacific Ry. Co. used many of the Wolhaupter Tie Plates of the earlier type, like Exhibit No. 67 (illustrated by Ex. 66, R. Vol. 2, p. 563), also some having a flat bottom, flat top Tie Plates, fabricated at its own rolling mills at Laramie, Wyoming, known as the Sacramento Plate (Ex. No. 63, R. Vol. 2, p. 556; Wallace, R. Vol. 2, p. 555); that the Sacramento plate was redesigned by Mr. Wallace (who was engineer of Maintenance of Way of the Southern Pacific from 1900 to 1908 (R. Vol. 2, p. 555) in the summer of 1904 and called the "Harriman" Tie Plate (Ex. No. 12, R. Vol. 1, p. 41; R. Vol. 2, pp. 555-6).

Very soon after these Harriman plates had been installed in track on the Southern Pacific, notices of infringement of the Wolhaupter patent-in-suit No. 721,644 were served upon the Harriman System by The Railroad Supply Co. and the fabrication of the Harriman plates was at once suspended.

Mr. Wallace testified:

> "Shortly after this we received notice from Mr. Kruttschmitt that the plate, drawing of which I had sent him, would infringe on the Wolhaupter patent. * * * A few weeks later we received word that arrangements had been made to roll the plate as originally designed."
>
> (Wallace, R. Vol. 2, p. 555.)



THE "HARRIMAN" PLATE MADE BY THE RAILROAD SUPPLY CO. AND SOLD TO HARRIMAN SYSTEM.

(R. Vol. I, pp. 41 and 46).

The "arrangements" referred to by Mr. Wallace were the granting of a limited shop right license, dated the 11th day of June, 1908, permit-

ting the licensee, the Harriman System, to roll the Harriman plate at its Laramie mill only and only for its own use. (Exhibit No. 174, R. Vol. 2, p. 876.) In paragraph 6 of said license, the Harriman lines "hereby *admit and acknowledge the validity* of Letters-Patent No. 721,644," the ownership thereof by The Railroad Supply Company, the exclusive right of appellant to make, use and sell Tie Plates having a corrugated top and rail sustaining shoulder, and that the licensees agreed not to "directly or indirectly contest the validity of said Letters-Patent" (Harriman License, R. Vol. 2, p. 876).

It is further shown by the record that in the meantime, the Railroad Supply Co. began selling Harriman plates to the Harriman lines in February, 1905 (Bell, R. Vol. I, pp. 90 and 139), has continued so to do "ever since" and is now making said Harriman Tie Plates and selling same to the Harriman Lines (Hawley, X-Q. 20, R. Vol. 1, p. 46).

The Santa Fe System and the Harriman System were the *only* infringers prior to the beginning of this suit—some fourteen years. This in itself would be a significant showing. But more significant is the fact that *both* have acknowledged the utility of the Wolhaupter patents and value of his invention—the one by its *enormous* purchases of Wolhaupter Tie Plates, *pendente lite*, and the other by the acceptance of the license as well as by the purchase of large numbers of the patented Tie Plates from the Supply Co.

65

Gold Medal Award.

At the Universal Exposition held in St. Louis in 1904, the International Jury of Awards conferred a gold medal upon the Railroad Supply Co. for its exhibit of Wolhaupter Corrugated top Tie Plates. (See Diploma Exhibit No. 163, R. Vol. 2, p. 869). Mr. Willard R. Smith, the editor and proprietor of the Railway and Engineering Review, was chief of the Department of Transportation of that Exposition, and also a member of the International Jury (R. Vol. 2, p. 868).

Mr. Smith testified that this award on the Wolhaupter Tie Plates was "the highest award which could be made under the rules of the exposition to the exhibit of any single device (Smith, Q. 12, R. Vol. 2, 868, and Smith, R-D-Q. 24, R. Vol. 2, p. 870); explained the rules governing and the method of arriving at a decision; gave the names of the jurors (R. Vol. 2, p. 868)—all experienced railroad men and engineers. Mr. Kendrick, the vice-president of the Santa Fe was a juror (R. Vol. 2, p. 868).

Remarkable Showing of Public Acquiescence.

During the entire life of the first Wolhaupter patent—a term of seventeen years—but *two instances of infringement* of either of the three patents in suit have occurred. This is a remarkable and very significant circumstance.

The record shows that the Railroad Supply Company does not enjoy a monopoly of the rolling mill industry—and that there are as many other con-

cerns having facilities for and in fact engaged in the rolling of Tie Plates. So that any railroad engineer desiring to use a Tie Plate other than the Wolhaupter's, whether because he thought it a better plate than Wolhaupter's or cheaper or longer lived, would have been able to have such plates rolled for his road. The prior art was open and the rolling mills were open to all. Users preferred to use the Wolhaupter plates purchased legitimately from the Supply Co. None thought the validity of Wolhaupter's patents so doubtful as to justify an attempt at infringement.

The Southern Pacific infringement was evidently begun in entire ignorance of the Wolhaupter's patents. In 1904 the Southern Pacific, having taken over a small mill at Laramie, Wyoming, began rolling the Harriman plate to use up the "scrap" coming to the mill. Infringement notice was served and the rolling of these plates at once suspended. Then followed the Harriman license (Ex. No. 174, R. Vol. 2, p. 876). Prompt *recognition* of the Wolhaupter patent followed.

The Elyria Co. and the Hart Co. infringement did not occur until 1908. The Santa Fe System, because its purchasing agent could not dictate the *prices* at which he would buy Wolhaupter plates (after his road had purchased Wolhaupter plates for twelve or more years and installed millions of them in track), *induced* the infringement. It *guaranteed* the Hart Co. immunity. It is a fair conclusion that in the absence of such a guarantee from the Santa Fe, this infringement would not have been undertaken by these defendants or either of them.

However, any attempt at showing a belief in the invalidity of the Wolhaupter's patents by reason of the infringement induced by the Santa Fe System is counterbalanced and in fact overturned by the subsequent actions of its officials, in purchasing, *pendente lite,* from the Railroad Supply Company over 83,000 tons of the infringing Tie Plates.

It is respectfully insisted that this remarkable showing of public acceptance of the Wolhaupter patents with but these *two instances of infringement* together with the *circumstances* of each and actions of the interested parties in each case, should be and is an *important factor* in determining utility and validity of the Wolhaupter patents.

VIII.

THE PRIOR ART.

(a) Few Patents Need Be Considered.

The record shows that seventy-one prior patents were introduced as anticipatory, and to show the state of the art. Surely, each one is not an anticipation of each of the Wolhaupter patents in suit, although from their aggregation in the main brief, one would think that the writer (Mr. Reed) was of that opinion. Neither his professional expert witness (Mr. Carter), nor his associate counsel, Mr. Fish, seem to agree with him. The expert flatly refused to testify to but twenty-four of the prior patents, while the distinguished counsel who wrote the supplemental brief contented himself with a reference therein to but five patents.

In considering the bearing of the prior art upon the validity of the Wolhaupter patents, most of the patents cited in the record may be entirely disregarded by this court. This is so, not only because they are not in and by themselves cited as anticipations of any one Wolhaupter claim, as a whole, not only because the **"law of their structure"** (*Clough* v. *Barker,* 106 U. S. 312) differentiates them, not only because of showing only *one* or *two* of Wolhaupter's *segregated* elements or features,—not only because many were merely introduced as exhibits *without one word* of testimony regarding them uttered by any expert or other of defendant's witnesses, but also because such a mass and *aggregation of patents* introduced as a defense is flatly *dehors* the well established rules of this court, as set forth in *Bates* v. *Coe,* 98 U. S. 31, and other cases, *supra,* pp. 10 and 22.

The witness, Carter, in referring to the twenty-four patents, stated they were the best references (X-Q. 21, R. Vol. 1, p. 389). With respect to the first Wolhaupter patent, Carter referred to twelve prior patents, but when asked which *one* was the "most pertinent" reference, he said:

> *"The nearest approach to it in the prior art considering it as a complete whole, is perhaps the Tie Plate of the Reece patent,* No. 494,692, of April 4, 1893, which is exemplified by 'Defendant's Exhibit O'." * * *
>
> *"Considering your question as confined to claim* 8 * * * *'I should say that the Wells patent No.* 203,590, of May 14, 1878, *and the Goldie patent No.* 485,030 *of Oct.* 25, 1892, *were the best references,* and as between *them I should place greater emphasis on the Goldie plate.'* * * *."

(Carter, Rec., Vol. 1, p. 390.)

In the supplemental brief (by Mr. Fish), reliance is made on this Goldie patent and also upon the Dockstader patent No. 462,399; Dunham, No. 469,386; Wilson, No. 522,867, and Wells, No. 203,570. The writer of the main brief (Mr. Reed) also aggregates his defense patents and relies upon all of them, for he cites the entire batch of seventy-odd patents.

As to Wolhaupter's second patent, No. 691,332, the witness, Carter, cited only four prior patents, and then pointed out that the:

> "*Reece patent, No.* 494,692, *comes nearer to disclosing* the precise Tie Plate construction of this second Wolhaupter patent than any prior patent which has been called to my attention." (X-Q. 23, R. Vol. 1, p. 390.)

Again, one counsel disagrees with his expert, and relies upon the entire seventy-odd patents and the other counsel disagrees with both, and relies upon the Goldie and the Wells' patents only, in his supplemental brief.

As to the third Wolhaupter patent, the expert witness, Carter, made reference to nineteen prior patents, but finally settled down to the Sellers' patent, No. 684,466, as most nearly disclosing its structure and to the Goldie patent, No. 485,030, "as perhaps the most pertinent," with respect to Wolhaupter's claims 7 and 9. Again, one counsel cites all of the prior patents, while the other counsel, in the supplemental brief, differs both from his associate and his witness, and relies upon Goldie, Wells, Dockstader and a prior Wolhaupter patent.

We shall, therefore, herein dismiss from consideration all prior patents discarded by Messrs. Carter

and Fish, and proceed to consider only those patents which are alleged to be the "most pertinent."

This court will agree with the statement of the Seventh Circuit Court of Appeals, which was:

> "An analysis of all the prior patents we deem unnecessary. If the strongest cannot prevail, it would be profitless to review the others." (Opinion, C. C. A. Hart case, R. Vol. 3, p. 1415.)

(b) Dockstader Patent No. 462,399.

In the supplemental brief, our opponent makes reference to the Dockstader patent, on a rail joint (Rec., p. 1158), asserting that it shows *inter alia*, certain features of the Wolhaupter patented combinations. Counsel mutilates the Dockstader rail joint construction in the illustration in his supplemental brief, p. 23, and by eliminating features structurally necessary for its intended use as a rail joint, counsel insists that as thus altered, changed and modified, it discloses, not Wolhaupter's but the defendants' Tie Plate. Counsel then argue that "if the defendants' Tie Plate is an infringement" of the Wolhaupter patent, Dockstader is an anticipation (Suppl. Bf., pp. 23, 59; main Bf., p. 46).

It should be borne in mind that their expert, Mr. Carter, has not cited the Dockstader patent as an anticipation. He placed his emphasis upon the Goldie, No. 485,030; Reece, No. 494,692, and Sellers, No. 684,466, patents, as the best references to Wolhaupter's first, second and third patents, respectively. It will be unnecessary, therefore, to further discuss this patent, it being admittedly not as pertinent

nor as close a reference to those indicated by the witness, Carter, to be the best.

In the supplemental brief (p. 59), however, a most unfair and equally unsound argument is made. After pointing out the parts of Dockstader's rail joint device having alleged similarity to Wolhaupter's features, the brief writer (Mr. Fish) states:

> "It is immaterial that in the Dockstader device, there are the *additional* parts B', B^1 and B^2, which support the upper part of the rail. It would require no invention to remove those parts."

The authorities cited by counsel are not in point because, for one thing, the premise is wrong and for another, the facts of those cases are very different from those in the cases at bar.

The Dockstader rail joints are strung over the rail, one at each end, and become a chair for the rail. They are a part of the rail and both rail and chair are then placed in position upon the ties and spiked thereon. Wolhaupter's Tie Plates, on the other hand, may be slipped under a slightly raised rail and between the rail and the tie.

The *wave* motion, due to passing train loads, is between the rail base and the Tie Plate. In Dockstader's heavy rail chair and joint, relative motion is between it and the tie. There is no relative motion between it and the rail. Hence no occasion for it to function in any way as does a Tie Plate, and its form does not *suggest* its use as a Tie Plate.

These considerations point clearly to the fact that a mechanic looking at Dockstader's device, would never conceive the idea of mutilating or redesigning

his chair or rail joint so as to remove from it those essential parts which give it life and vitality as a chair or rail joint. There is nothing in his specification to indicate that it could be used as a Tie Plate. It is *not* shown in the record that it ever has been so used. Every suggestion in the Dockstader device and patent leads away from and does not point to Tie Plates in general—nor to Wolhaupter's Tie Plate in particular. To change it as suggested by counsel would violate the "law of its structure."

For authorities, see *Topliff* v. *Topliff*, and others cited XII, (a), (b), page 22, *supra*.

The question is not as stated by counsel in the supplemental brief—that it would require no invention to change Dockstader so as to cut out from its structure a Wolhaupter Tie Plate. The question is whether with a Dockstader rail joint before him, Wolhaupter or any other skilled man, skilled in the Tie Plate art, would have had a clear mental concept of the Wolhaupter patented plate and have realized a means for so reorganizing the rail joint as to, in fact, produce the patented plate.

The learned counsel, Mr. Fish, with his years of experience as a dissecting surgeon in patent defenses, and with the light of Wolhaupter's patent, says he could have done this "without invention." But how about the eye of the skilled mechanics, and patentees, who, presumably considered this same question during the more than *thirteen* years between the dates of Dockstader and the Wolhaupter patents? Even assuming that the change suggested could be

made, physically, it by no means follows that the ingenuity of an inventor was not involved in its conception and execution.

> **"The eye that sees a thing already embodied in mechanical form gives little credit to the eye that first saw it in imagination, BUT THE DIFFERENCE IS JUST THE DIFFERENCE BETWEEN WHAT IS COMMON OBSERVATION AND WHAT CONSTITUTES AN ACT OF CREATION. The one is the eye of inventive genius, the other of a looker-on after the fact."**
>
> *Faries Mfg. Co.* v. *Brown,* 121 Fed. Rep. 547, C. C. A. 7th Cir.

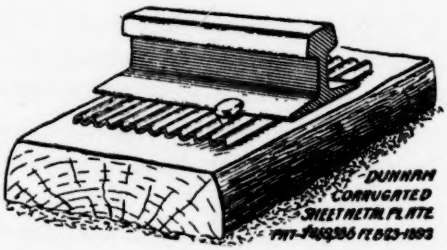
And this court has said:

> **"But it is plain from the evidence and from the very fact that it was not sooner adopted and used, that it did not for years occur in this light, even to the most skillful persons; IT MAY HAVE BEEN UNDER THEIR VERY EYES; THEY MAY ALMOST BE SAID TO HAVE STUMBLED OVER IT; BUT THEY CERTAINLY FAILED TO SEE IT, TO ESTIMATE ITS VALUE AND TO BRING IT INTO NOTICE."**
>
> (Capitals ours.)
>
> *Loom Co.* v. *Higgins,* 105 U. S. 850.

(c) Dunham 1892 Patent No. 469,386.

This patent discloses a piece of corrugated metal to be interposed between a rail and the tie. The patentee states that he has *two objects,* first, to prevent bending or buckling caused by the weight of the rolling stock. His second object was to provide *air spaces* between the *bottom* of the plate and the

wooden tie for the free access of air, in the expectation that moisture would not collect on the surface of the tie.



Our opponents call attention to this patent as corresponding completely to claim 8 of the first Wolhaupter patent. They do not cite it to either the second or third Wolhaupter patents in suit. Through their expert witness, Carter, they call the rounded portions of the corrugations on the underside of the plate "a series of parallel ribs," which they state are more or less sharpened and adapted to penetrate and engage the tie. The rounded portions of the corrugations on the top of the plate, they state are a series of tie supporting flanges on which the rail rests.

Thus, they inconsistently describe the *rounded* portions below the plate as "more or less sharpened" ribs, and similarly rounded upper portions—not as sharp flanges but flat rail bearing surfaces.

A mere inspection of the Dunham patent demonstrates the utter fallacy of their contentions. The rounded parts or corrugations on the under side are *not adapted* to penetrate the tie. They are *not sharpened* "more or less" or otherwise. They are blunt and rounded so as to *avoid* entering the tie.

The rounded upper portions of the top of the plate are not "flanges"; nor are they comparable either in form or in function, with the "series of tie supporting flanges" of the Wolhaupter patent. Moreover, there are no grooves cut out of the body of the Dunham plate. The Dunham plate, if ever made, would have a body of *uniform thickness.*

Mr. Carter, who was the only witness called by the defense to consider the Dunham patent, admitted that he had never seen any Tie Plate manufactured and that he had never seen a Dunham Tie Plate in use in track. His statements with respect to it, it is submitted, must be mere conjectures.

Upon the other hand, it is very clearly established by the plaintiff's witnesses, Miller, McElroy and Wolhaupter, that this Dunham plate was not *intended* or *adapted* to have the corrugations on the underside "penetrate and engage" the tie. The rounded parts cannot be considered as being "more or less sharpened." Dunham had no direction or suggestion to this end. His patent proceeded upon an entirely different hypothesis. *He did not want his plate embedded in the tie. He wanted it to remain on top of the tie.* The object of these corrugations is stated in the Dunham specifications to be:

> "to *form air spaces* between the bottom of the plate and the tie." (Dunham Pat., No. 469,386.)

Fig 4. DUNHAM PLATE #469,386, SHOWING CORRUGATED "AIR SPACES" ON BOTTOM. FLAT TOP

Moreover, Fig. 4 of the Dunham patent shows as a modification of his invention, his disclosure to the public, a *flat top plate,* retaining, however, his *air spaces on the bottom* of his plate. As already stated with respect to the corrugated form, it is also manifest that, if the weight of a train load passing over this modified form of plate could press the blunt, rounded under projections into the tie, the spaces between them would be quite filled by the wood. Hence the "air spaces" idea would be eliminated. While, if the air spaces remain, it will be only because these unsharpened under ribs are too blunt to penetrate the tie. To retain the air spaces, the plate must remain on top of and must not penetrate the tie, and to penetrate the tie means the elimination of the air spaces. Thus Dunham's plate cannot accomplish Wolhaupter's object nor Wolhaupter's plate perform the function of Dunham.

The "law of the structure" of the Dunham patent would thus be broken (*Clough* v. *Barker, supra,* 22). Under the repeated rulings of this court prior patents must be treated as anticipations only in accordance with *their own disclosures,* interpreted and read in accordance with the law of their being.

Hence, no practiced mechanic has ever attempted even to experiment with, much less use, a Dunham plate in a railroad track.

There is another trouble with Dunham's device. Dunham states in his patent that his plate be made about 3/16 of an inch in thickness—much thinner and lighter than a flat plate such as used in the prior

art. This would make it inoperative for any purpose.

> "It is perfectly manifest to me from my knowledge of railroad operations, that a 3/16 inch corrugated sheet plate placed between the upper face of the tie and the bottom of the rail flange would not stand up, but would be *crushed and flattened out* by the use of such railway equipment of such weight as was commonly used at the date of this patent, to wit, February 23, 1892." (Miller Dep., R. Vol. 2, p. 661.)

This would, of course, also be true of the heavier engines and rolling stock of later date.

Counsel submitted the Dunham patent to Mr. Wolhaupter, upon cross-examination, and asked him to compare it with the Wolhaupter Tie Plate, and he testified that it really did not compare at all with his plate. He said:

> "In the case of the so-called Dunham plate, the rails merely rest on lines or points giving very little bearing and *making the plate subject to compression and wear,* whereas in the Wolhaupter plate there are broad supporting surfaces between the grooves, thus preventing the distortion of the metal that would take place in such a device as the Dunham plate. * * *
>
> "As explained before the sand and grit deposited on a Tie Plate is produced by the passage of the train. In this Dunham plate the first wheel passing over it would *flatten the plate and make it a thin flat sheet* and thus make it a flat top Tie Plate before any sand could get on it." * * *
>
> "The drawings or illustrations shown in the drawings to an engineering man *shows an entirely impractical structure* for the simple reason that any load that rail and tie would be designed to carry would immediately destroy the

structure of the plate, make it impractical and make it a thin, flat sheet of metal, so that I do not see how it could stay intact."

(Wolhaupter Dep. X-Q. 168-176, R. Vol. 1, p. 184.)

(See also McElroy Dep. R. Vol. 1, p. 72.)

It is clear that nothing contained in the Dunham patent anticipates nor even suggests the Wolhaupter invention and patent.

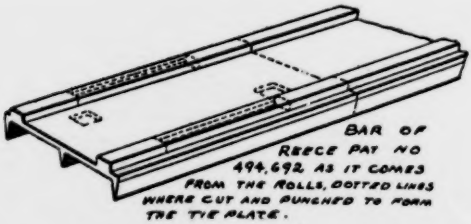
(d) Reece Patent of 1893, No. 494,692.

The supplemental brief (by Mr. Fish) does not refer to the Reece patent for any purpose. The main brief (by Mr. Reed), on page 49, briefly describes the aluminum model of the Reece plate but makes no application of its bearing upon the Wolhaupter patents. The witness Carter, however, stated that this Reece patent

"comes nearer to disclosing the precise Tie Plate of this second Wolhaupter patent than any other prior patent"

which had been called to his attention. (Carter, X-Q. 23, R. Vol. 1, p. 390.) In order to arrive at this conclusion, Mr. Carter was necessarily obliged to *disregard the obvious disclosure* and *"law of its structure"* and to *misinterpret* the Reece patent to meet the exigencies of the defense.

The plate of the Reece patent is first rolled into a long bar having a *body of uniform* thickness, and has a flat top and a flat bottom. Projecting from the bottom are three ribs and upon the top of the body are two raised longitudinally extending ribs, one at each margin.



Sections of this bar are cut off—Tie Plate length, and then the central portions of these two top ribs are *cut away*. These operations are indicated in the following illustration, the dotted lines showing where the cutting occurs.

When the *parts are cut away*, the cutting or punching operation extends not only through the two raised marginal ribs, but *also down through the body* of the plate itself, thus making two elongated, rectangular shaped *holes through the plate body.*

When asked if the Reece patent does not show a flat top surface for the rail to rest upon, Mr. Carter answered:

> A. It shows a flat surface cut away in two places so that the bearing surface is interrupted and divided into three supporting surfaces." (Carter, R. Vol. 1, p. 424.)

The rail rests between the adjacent ends of the cut out ribs. It rests upon the *flat* top of the body of the plate between these ends which act as rail

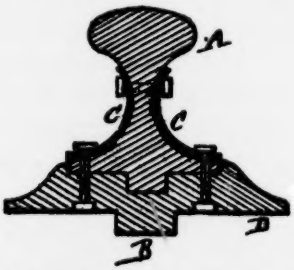
abutting shoulders. The rail thus covers up the two punched-out holes in the plate body. These holes are in no sense channels or grooves, nor do they function as such. Neither may the raised up rail abutting shoulders be in any sense called flanges, nor do they function as such.

The Wolhaupter patent calls for *flanges, raised* flanges, projecting above the upper surface or body of the Tie Plate. These flanges must be raised above the body or top surface of the Tie Plate to *form a series of supporting* surfaces for the rail base. *In Reece, the rail rests upon the flat body of the plate.* In Wolhaupter, the rail does not rest upon the body. In Reece, the parts raised above the body are rail abutting shoulders and not flanges. In Wolhaupter, the parts raised above the body of the plate are rail supporting and bearing surfaces.

It is manifest, therefore, that the Reece patent, while antedating Wolhaupter, discloses absolutely nothing of the latter's invention and it neither anticipates nor has any bearing as a limitation upon the claims in issue. The fact that neither counsel urge it strenuously shows that each is unwilling to stand by its improper interpretation and misrepresentation as given in Carter's deposition.

(e) Hudson Patent No. 142,020.

The Seventh Circuit Court considered the Hudson patent No. 142,020 in Par. A, Sec. 8 of the opinion, giving an illustration of the structure along with a description thereof.



The court held it to be in the rail chair art, and not a Tie Plate in form or in function, saying:

> "The Hudson patent, in our judgment, *furnished no light* to those concerned with the problem of producing an efficient Tie Plate. * * * And, it was not until after Wolhaupter's disclosure that any mechanic, expert or otherwise, claims to have discovered in the *twenty-two year* old Hudson patent, any instruction regarding the way in which to build an efficient Tie Plate." (Italics ours.)
>
> (Opinion, C. C. A. *Hart* case, R. Vol. 3, p. 1416.)

We deem it unnecessary to comment further upon this obviously unimportant and insufficient reference of the prior art.

(f) Wilson Patent of 1894, No 522,867.

As already indicated, this patent was introduced by defendants' counsel (R. Vol. 1, p. 339) without any explanatory evidence, being one of the mass of pleaded defense patents discarded by the witness Carter. The only evidence taken with respect thereto is in the depositions of plaintiff's witnesses (Miller, R. Vol. 2, p. 667, and McElroy, R. Vol. 2, p. 751.)

The device of the Wilson patent (R. Vol. 3, p. 1229) is a peculiar structure made in *three* parts and requiring in addition two spikes, making it a commercially impractical device. Any two or three part structure placed in a road bed upon a tie and subjected to constantly varying loads and strains of passing trains, cannot possibly have the durability that a one piece structure would have.

The drawing in the supplemental brief, p. 25, is not taken from the Wilson patent and is confusing and misleading.

The Wilson patent shows a plate having a perfectly flat bottom. It has no "devices more or less sharpened, adapted to penetrate and engage the tie," as called for by the Wolhaupter patents. In order to hold this flat bottom plate to the tie, apertures are punched through its body portion, these apertures being indicated in the patent drawings by the letter a^3. Rail abutting shoulders are formed *by a plate* having the function also of spike fastenings, *two of such* plates being shown in Figs. 7 and 8 of the Wilson patent. These plates, B,

are provided at either end with rail abutting shoulders b, and are also provided with downwardly sharpened spikes b^2. The plate B, the spikes and the shoulders b are integral.

The flat bottom Tie Plate A of the Wilson patent is provided with recesses in which are located the punched out spike holes at, and *these shouldered spike plates B are placed in these recesses.* When the spikes b^2 are positioned, the plate B is forced into the recesses of the plate A by driving the spikes b^2 into the tie. The spikes first pass through the punched out part b^3. When the combined plate A, with its two sub-plates B, B, are thus positioned on the tie, the *top surface* of the ribs a of the plate A, or of the broad central portion a^2, *lie in the same horizontal plane,* with the top surface of the two plates B, B. These top surfaces of the plates A and B, B, thus *form one continuous flat surface for the base* of the rail C to rest upon. There is nothing of a series or raised rail supporting surfaces, as required by the Wolhaupter patent.

The court should not be misled by considering *only the portion* of the Wilson patent illustrated in the supplemental brief (Mr. Fish), p. 25, but should look at the entire drawing of the Wilson patent (Rec. Vol. 3, p. 1229).

The first Wolhaupter patent calls, in claim 8 in issue, for two elements in combination—a "series" of rail supporting surfaces raised above the top surface of the body of the plate, and devices more or less sharpened, ribs projecting from the under side of the body of the plate itself. The Wilson patent has neither of these two elements.

In addition to an excessive original cost, and the additional cost of handling the various parts of the Wilson Tie Plate over a self-contained or one-piece Tie Plate, there are two other objections that may be noted. The Wilson plate could not be used on roads upon which the rails had already been laid, for the reason that the entire length of the rail would have to be raised, all the spikes removed from the various ties throughout the length of the rail, and the rail lifted, before the Wilson plates could be placed upon the tie. Again, this same operation would have to be repeated in case of the substitution in track of a single new Tie Plate, after one was broken or worn out.

The cost of manufacture of devices used in track, and the ease and convenience by which they may be fabricated is a very important factor in the Tie Plate art. Counsel in the supplementary brief has stated the saving of a few cents or few ounces in weight, on the many millions of plates sold, means a great deal, since to equip each end of a tie on each mile of railroad requires 5,280 Tie Plates. A Tie Plate must be simple, so that the relatively cheap gang labor employed in track construction may readily comprehend its construction and install it economically in the road bed. The mere reduction of the three part Wilson plate into a one piece plate, of Wilson's precise design, would of itself have been a patentable improvement over the Wilson patent in evidence. It would have had utility and patentable merit.

But Wolhaupter has done more than that—he has produced a Tie Plate upon an entirely different

theory, namely: one in which the top surface is provided with a series of interrupted, rail bearing surfaces, raised above the body of his plate,—these surfaces being sufficient in number to give the necessary support to the rail, and by being interrupted, increase the holding or biting tendency of the rail to the plate: a plate having at the same time integral therewith a set of devices projecting from its under side, so sharpened as to penetrate and engage the tie. This invention, with its attendant results, is not only not shown or described in the Wilson patent, but is not even suggested therein.

For the reasons above mentioned, the Wilson patent does not meet either of the three claims of the second Wolhaupter patent, each of which call for a Tie Plate provided "on the under side with one or more tie-engaging flanges, extending parallel with the upper flanges and directly beneath the latter."

Nor does it have "an additional flange or flanges extending above the plane of the rail sustaining flanges and adapted to receive the lateral thrust of the rail," as required by the third claim of the second Wolhaupter patent. The thrust bearing shoulders *b* of the Wilson patent are formed on the independent "separate guard device B" of the Wilson structure which forms no part of the Tie Plate proper.

Neither does this Wilson patent show a device "produced in its rail supporting surface with transverse grooves or channels, and at one margin of said supporting surface, with a transverse rail abutting shoulder," as is required by both of the claims in controversy in the third Wolhaupter patent.

The depositions of both witnesses Miller and McElroy, are in accord with respect to this patent, and as before stated, Carter gave no evidence with respect to it. It is a significant fact that either no argument was made upon it in any of the hearings below, or if made, the Wilson patent made so little impression that in none of the four opinions of the courts below, was it even mentioned as an anticipation.

(g) Goldie Patent of 1892, No. 485,030.

In considering this patent of Goldie, we call attention to Mr. Carter's statement in his cross-examination that while he considers the Wells patent and this Goldie patent to be the best references to Claim 8 of the first Wolhaupter patent, as between them, he placed "greater emphasis on the Goldie plate." (Carter Dep. X-Q. 22, R. Vol. 1, p. 390.)

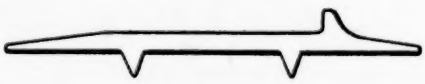
And attention is further called to the fact that on his direct examination, Mr. Carter said at the outset of his consideration of this Goldie patent:

> "Attention is called to this Goldie patent, *not so much because of its resemblance* to what the Wolhaupter patent No. 538,809, now under consideration, discloses, but because its construction is so nearly identical with defendants' Tie Plate construction."
>
> (Carter, Dep., part of Ans. Q-5, Rec. Vol. 1, p. 357.)

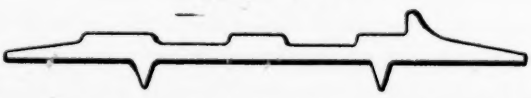
The absurdity of Mr. Carter's statement is shown by the following illustrations of these three Tie Plates.

WOLHAUPTER

GOLDIE



DEFENDANT



The inconsistency of these two statements is significant, particularly as the greatest stress of the argument by both counsel in both courts of appeals hearings was laid on this Goldie patent as an anticipation.

In the brief of Mr. Reed, p. 37, he cites Carter as testifying that Goldie's Tie Plate is "so substantially identical in its construction with the defendant's Tie Plate, that any *interpretation* of Claim 8 which makes it cover defendant's device must make it anticipatory of the first Wolhaupter patent," and again on p. 39, counsel declares Goldie's Plate is "almost a facsimile of defendants' plate."

In the supplemental brief by Mr. Fish, counsel also begs the question of alleged anticipation when he states (Fish, Suppl. Bf., page 54), that Goldie's patent anticipates Claim 8 of Wolhaupter's first patent, "*if* that claim is so broadly construed as to be infringed by the defendants' Tie Plate."

Counsel declares the Goldie patent, and the prior use of the Goldie Plate:

> "prohibit any construction of Claim 8 of that (Wolhaupter) patent which would read it upon defendant's plate." (Fish, Suppl. Bf., pp. 57-58.)

Thus both counsel and their expert substantially *abandon* the Goldie patent and the experimental and unsuccessful prior use of the Goldie plates as being *anticipatory* and place the weight of the argument here, upon the Goldie patent in aid of their technical construction theory to avoid infringement.

In order to demonstrate the fallacy of either contention, we shall now briefly consider the Goldie patent, as a disclosure of the prior art, and then the Goldie Tie Plates as made by Goldie under his patent and then abandoned because of their practical and commercial failure.

The Goldie patent and its disclosure illustrates the *fourth attempt* of Goldie to produce a practical Tie Plate. He was a mechanician—a manufacturer of large experience with wood-working and steel working machinery, and was employed for many years as a mechanical expert by Dilworth, Porter & Co. (Goldie Dep., R. Vol. 2, p. 794.) He was a practical man; also a rather prolific inventor,—no less than seven of his Tie Plate patents

having been introduced in the record by the defendant. Goldie states:

> "I have taken out in my time about sixty patents in all the various lines I have been connected with in addition to a large number of construction patents, some eight or ten." (Goldie Dep. R. Vol. 2, p. 793.)

The Goldie patent states:

> "The *object* of my invention is to provide a Tie Plate for resting upon the rail and tie in which the middle portion which carries the rail will be supported *in such a way* as to avoid the common difficulty of *depressing the middle portion and elevating the lateral portions* by the action of the passing trains."
>
> (Goldie Pat. No. 485,030, line 42, p. 1.)

At the date of this Goldie patent, the mills were not as expert in rolling various sections of rail as they are today. The railway rails were then rolled convex or full in the center on the under side of the flange or rail base. And, where an attempt was made to roll a rail with a flat base, there was usually a *projecting burr or ridge in the middle of the rail base,* so that when it rested upon a flat horizontal surface, the rail would tip and rock from side to side. This convex projection on the bottom of the rail resting upon a thin straight or flat plate had the very effect mentioned in the Goldie patent as "the common difficulty" of depressing the middle portion and of elevating the end portions of the plate, thus causing the plate to buckle.

It was evidently the intention of this inventor to provide a Tie Plate that would accommodate itself to this particular form of rail base and thereby prevent buckling. The Goldie patent shows that

the rail base therein illustrated is *not flat*, as may be demonstrated by the court by laying a straight edge along it. The testimony of the patentee, himself, is of the utmost importance, upon the object he had in designing that particular construction:

> "A. At that time the rails were slightly convex on the bottom of the flange of the rail and I put that depression in for the purpose of giving the rail a *more secure seat* upon the Tie Plate, and upon doing that and depressing this" (indicating the under side of the plate, Exhibit No. 144), "I made it convex on the bottom, *slightly for the reason* that I wanted to get a *support in the middle;* thereby rendering it more difficult to buckle the plate when it came into use, the plate being applied when the tie to which it was applied was in the track and at first it rested entirely on the point of those ribs. When it came down, when it was forced down by the action of the train passing over it, *it got a support in the middle from this convex portion* and relieved the pressure on the extreme end and had a tendency to prevent the plate from buckling, as at that time, owing to economic reasons, we could not induce the railroads to purchase a heavier plate than about one-fourth of an inch and this gave it support in the center."
>
> (Goldie Dep., Q. 22, Vol. 2, p. 795.)

The court will be impressed with the fact that the essentially novel idea disclosed in the Goldie patent was the *bending* of the Tie Plate of *uniform thickness* by the rolling of a *very slight curve* in the center of the plate. This slight curve extended beneath the center line of the rail and longitudinally with the rail. The buckling of the plates had occurred because of the *convexity of and projections or burrs on the base of the rails.*

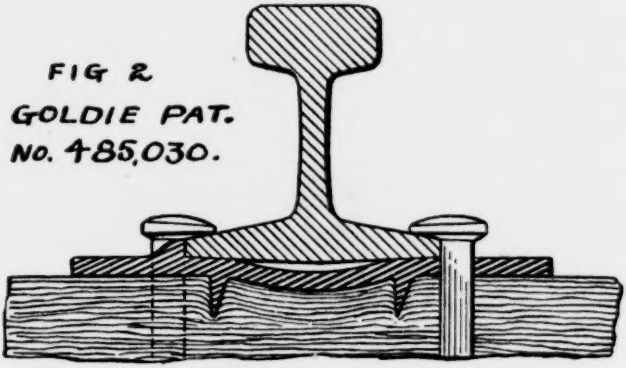
Goldie's theory, as disclosed by this patent, was that the pressure of the rail, as the train load passed over it, *would cause* the convex surface on the bottom of the rail to *accommodate* itself to the concave surface of the top of the Tie Plate. **The BEND in the plate would then flatten out, the rail base and the top of the plate would thus become CLOSELY UNITED and thus prevent the plate from buckling.**

It is asserted in the supplemental brief, as well as in the first brief filed by our opponents, that a rounded rail base would only partially fill the depression in the Goldie plate; that when a flat base rail is used in track with the Goldie plate, the depression is not filled at all; that in each case there is a "cavity" or groove in the top of the Goldie plate beneath the rail; and, finally, that the plates, Exhibits B and C, taken out of track by Falkner after years of use, demonstrate their statements to be true. *The proofs do not support these contentions.*

On the contrary, we insist that the physical Exhibits B and C, will be found to have had, when in track, such *intimate union* with the rail base as to have straightened out the original bent portion and to prove that neither had a *groove or cavity in use in track.* The Seventh Circuit Court of Appeals found this to be true, and so ruled (Sec. b, opinion Hart case, Vol. III., p. 1417).

"It will be noted," says expert McElroy, in commenting upon this feature, "*that the ends of the rail* supporting surface *are practically flat*" (R. Vol.

2, p. 747). This may be verified by the court for itself by merely inspecting these Exhibits B and C. Goldie testified that he made this slight depression by bending the plate in the rolling process and "I put that depression in for the purpose of giving the rail *a more secure seat* upon the Tie Plate." (R. Vol. 2, p. 796).



When printed or photolithographed, patent drawings are reduced to about one-third of the size of the drawing as originally lodged in the Patent Office. The field of the sheet on which the drawing is made is so small that it is a common practice—indeed it is frequently necessary, to enlarge a given part much beyond its normal size in order that its construction may be obvious and apparent in the reduced printed patent. Every patent lawyer knows this fact and we assume that the court will take judicial knowledge of it. Moreover, as testified to in this record, Patent Office drawings are not usually *made to scale,* but are purely illustrative drawings. Without bearing these facts in mind, the relatively and unduly large space in the picture drawing of the Goldie patent is very apt to mislead one.

An inspection of the two Goldie Tie Plates introduced in evidence by the defendants as Exhibits B and C, discloses the fact that the concavity on the upper surface as well as the corresponding convexity on the lower surface, *is very slight, and very much less,* proportionally, than is shown or indicated in the patent drawings.

Referring to the Goldie patent, Mr. McElroy said:

> "I may say that after the rail was in place the two opposed surfaces" (that is the top of the Goldie plate and the bottom of the base of the rail), "would approximate each other to such an extent that **there would be practically no channel** between the rail and the Tie Plate, assuming, of course, that the *original depression in the Tie Plate was only so much as was necessary to accommodate the convexity of the rail.* The amount of this concavity is doubtless *very much exaggerated* in the patent drawings, so as to make it perfectly obvious and apparent."
>
> (R. Vol. 2, p. 747.)

Referring to the Exhibit B:

> "It will also be noted that the ends of the rail supporting surface are practically flat, so that in use, *instead of there being a channel or groove* beneath the bottom of the rail and in the top of the Tie Plate, there was at best merely a very *shallow pocket* in the upper surface of the Tie Plate."
>
> (McElroy Rec. Vol. 2, p. 747.)

Referring to Exhibit C, which was not buckled quite so much as plate Exhibit B:

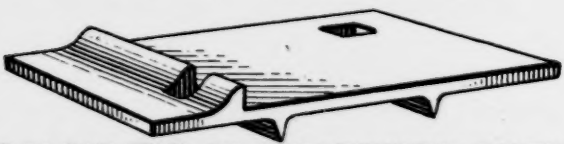
> "It will also be noted that the *ends* of the bearing surface are practically *flat,* so that the concavity **is that of a pocket rather than a channel, and being closed at its ends, does not have**

either of the functions of the grooves or channels of the third Wolhaupter patent-in-suit, *t. e.*, it **does not lighten the weight,** inasmuch as the concavity in the top and corresponding convexity in the bottom **does not lessen the thickness of the plate;** nor does it present a channel or rather channels, extending the *entire length* of the plate beneath the rail, and permitting the passage of air, sand, and water, etc."

(McElroy, R. Vol. 2, p. 747-8.)

Mr. E. H. Bell, in his deposition giving the evolution or commercial development of Tie Plate art, placed the Goldie Tie Plate in the class of *flat top plates.* Asked on cross-examination whether he noticed a depression in the top of the Goldie Tie Plate, and if so, why he classified that plate as a flat top plate, he answered:

"X-Q. 299. A. I class the Goldie plate as a flat or practically flat top Tie Plate for several reasons. The manufacturers in their advertisements or published articles, as I recall it, did not show any depression under the rail.



GOLDIE TIE AS ADVERTISED BY THE PATENTEE AND MANUFACTURERS. COMPLAINANT'S EX. NO. 146.

The drawings which I have made are from a sample of this plate which I have in my possession and the *depression is so slight that it is hardly discernible.* True, it can be seen, I think in my original testimony (direct examination) I testified that 'this plate had a slight concave and convex surface.'

X-Q. 300. A. The patent drawing that you have shown me shows the depression to a greater degree than is shown in the manufactured sample which I have. The depression can be seen by close examination of the plate, but it is very slight."
(Bell Rec. Vol. 1, p. 145-6).

It is very significant that counsel's brief (Fish Suppl. Br., p. 13) *illustrates* the "Goldie Tie Plate" as a flat top plate. (See also *Schleiter,* R. Vol. II, p. 820.)

Mr. Bell saw the Goldie plates as manufactured and before being installed in track noticed the slight bend in the plate and said that he "thought it was merely a defect in manufacturing." It "did not appear to me to be put there on purpose." (Bell, X-Q. 302, R. Vol. 1, p. 146.)

It was the tie and timber expert of the Santa Fe System, Mr. Faulkner, who removed Exhibits B and C from track at Las Vagas in 1904. These plates were so flattened out by their use in track that Mr. Faulkner *did not observe or recognize* at that time (1904) that the Exhibits B and C were anything other than *flat surface* Tie Plates. He made no mention in his report of 1904 of any groove or depression or recess in the top surface of these plates.

He admitted, on cross-examination, that he *first* realized that they did have such depressions some *five years later,* to wit, about two months prior to the date of giving his deposition, when he looked up these Tie Plates and his report and other data to prepare himself to testify as a witness. (Faulkner, X-Q. 482, R. Vol. 1, p. 275.) Moreover, Faulkner said that he *detected this only* because one of the

two plates (Ex. C) which had been placed to one side in his museum or collection of track devices, *and become more rusty* than had the other plate, Exhibit B, and that the rust or rust marking brought this feature to his attention.

Exhibit No. 144 is an original Goldie Tie Plate, as it came from the mill. This plate has never been placed in track. It was identified both by its author, Mr. Goldie, by Mr. Bell, and by its manufacturer, Mr. Schleiter, of Dilworth, Porter & Co. It shows an exceedingly slight depression on its upper surface. It requires a most minute inspection to detect that there is an undulation or depression in its upper surface. It is hardly perceptible unless one lays a straight edge across the face of the plate.

The frank admission of defendants' expert would seem to settle the whole matter.

> "X-Q. 138. Do you find in this Goldie patent any groove or depression or channel or corrugation placed in the top surface thereof for the purpose of lightening the plate?
> A. **No.**"
>
> (Carter, R. Vol. 1, p. 420.)

The pertinency of the Goldie patent as a prior art reference is destroyed by the *concession of defendants'* expert witness, that there is a total absence in the Goldie patent of anything *like a series of flanges* on the upper face of the plate on which the rail rests.

The body of the Goldie plate is of *uniform* thickness. That of the Wolhaupter is not. The *grooves* of Wolhaupter are *cut out* of the body of his plate for two purposes, first, to lighten the plate; and sec-

ondly, to form channels or grooves extending the *entire length* of the plate from one side margin to the other side margin. Thus, sand, water and other deleterious substances will the more quickly be gathered from the top of the plate or wearing surface and will ultimately pass entirely off the plate by means of these channels or grooves. The Goldie plate admittedly has no such groove or channel *for that or any other purpose.*

The rule of *Clough* v. *Barker, supra,* is peculiarly applicable to the Goldie patent. It fails miserably as an anticipation and cannot even be fairly considered as having the effect of limiting Wolhaupter's claims in any respect. The two devices are entirely dissimilar.

(h) Prior Use of Goldie Plates.

There is no dispute in the record as to the main fact that 1,000 so-called "Glendon" Tie Plates were manufactured at the Glendon Mills of Dilworth, Porter & Co. under U. S. Letters-Patent to Goldie, No. 485,030, and were used in track on the Santa Fe System, near Sulzbacher, in the fall of 1892. We not only admit prior use of "Defendants' Exhibits B and C," *two* of said 1,000 plates, but we adduced proof of the manufacture of somewhere between 30,000 to 50,000 similar Goldie Plates by Dilworth, Porter & Co. We submit, however, that the proofs show conclusively *an abandoned experiment,* having no invalidating value whatever.

The proof conclusively shows that after three years of unremitting efforts by the manufacturers and by

the patentee Goldie, as their salesman, aided by liberal advertising and all of the customary business artifices and inducements, such as furnishing *gratis* and without charge large quantities of the Goldie Plate to **forty-eight different railroads for testing purposes, no single road adopted the Plate nor was a single renewal order given.** The proof also shows that the manufacturers *abandoned* the Goldie Plate because of its failure to do its expected and intended work. Moreover, although Goldie had a royalty contract and had been paid a royalty or license fee on all such plates as were actually made, or sold and put into use, **Goldie voluntarily acquiesced in the abandonment of his plate. He has so testified** (Rec. Vol. 2, p. 798).

Notwithstanding these facts, it is asserted in our opponent's briefs that these Goldie Plates were practically used for many years in track and were sold and used by about 50 railroads. The record *does not* justify any such false statements and misleading conclusions. (Reed Bf., p. 52; Fish, Supl. Bf., p. 55.)

The facts regarding the production of the Goldie Plate are these: Dilworth, Porter & Co. manufactured and sold somewhere between 30,000 and 50,000 Goldie Tie Plates of the original pattern. (Schleiter Dep. Q. 21 to 26, R. Vol. 2, p. 818.) Mr. Goldie testified that not over 50,000 Tie Plates of this pattern were manufactured and sold. (Goldie Dep. Q. 44, R. Vol. 2, p. 799.)

A 1,000 lot went to the Santa Fe System December 9, 1912, being among the very earliest

sales that were made. Mr. Schleiter testified that *no single road adopted this Goldie Plate as a standard* (Q. 50, R. Vol. 2, p. 822); that the Santa Fe System did not give any renewal order or receive any Tie Plates of this pattern other than the one lot of 1,000 (Q. 32, R. Vol. 2, p. 819); that the Plate did not fulfill expectations and justify the continuance of its manufacture; that railroad men *"pooh-poohed it"* (X-Q. 87, R. Vol. 2, p. 826); and that very shortly after its manufacture was commenced, a modification of its design was made. In the new Goldie Plate *the characteristic feature* alleged to *be the feature* of the Goldie patent that makes it useful in argument as a limitation of or as an anticipation of the Wolhaupter patents, to wit, the slight depression in the upper surface, *was abandoned.* (X-Q. 81, R. Vol. 2, p. 825-6.) The new or modified Goldie Plate was a *perfectly straight Plate on its top surface,* where the rail rests, having no groove, cavity or depression whatsoever in the top surface. (R. Vol. II, p. 805, X-Q. 95.) The last plate of this type was sold by Dilworth, Porter & Co., September 23, 1895 (Schleiter Dep. Q. 16, R. Vol. 2, p. 817).

It appears from the evidence of Mr. Schleiter that the sales of Goldie Plates were made only between the fall of 1892 and the third quarter of 1895, a period of three years (Schleiter Dep. Q. 21, R. Vol. 2, p. 817); that sales were made only to the 48 railroads named (Q. 36); that the *usual* methods were employed to *advertise* and to introduce the Goldie Plate (Q. 33, *et seq.*); that the manufacture and sale of the Goldie Plate was *abandoned and discontinued* by Dilworth, Porter & Co. upon the *recommendation of*

the patentee, Mr. Goldie (Q. 50). (Schleiter, R. Vol. 2, pp. 819 to 822.)

Dilworth, Porter & Co. had ample mill facilities approximating fifty tons per day, for supplying all the demands for the Tie Plate, for which Goldie had hoped so much. (R. Vol. 2, p. 794.) Goldie himself had superintended (Q. 12, R. Vol. 2, p. 794) the preparation of the rolls from which the Plate was fabricated and the manufacturing of his Tie Plates was done under his supervision. Supplementing the efforts made by Dilworth, Porter & Co. to introduce his Tie Plate to the trade, by advertising and by the use of circulars and trade papers (Q. 32), Mr. Goldie personally visited the trade, solicited practically all the orders that were received for his Tie Plates. (Goldie, Q. 33, R. Vol. 2, p. 797.) He found that it was necessary to make special inducements to the railroads in order to have them take a sample lot of Tie Plates for test or experimental purposes. Many Goldie Plates were *furnished free for this purpose.* (Goldie, Q. 48, R. Vol. 2, p. 799; Schleiter, Q. 35, R. Vol. 2, p. 819.) During all this time Goldie was receiving a royalty upon his Tie Plates from Dilworth, Porter & Co. (R. Vol. 2, p. 821-822.)

In addition to the optimism and enthusiasm which inventors usually possess, Goldie would have been influenced by the fact that the more widely the introduction and use of his Tie Plates, the greater would be his revenue from license fees or royalties. Hence, Goldie would have been the very last person in the world to have abandoned the manufacture and sale

of his Tie Plate, if it presented any substantial merits and was a successful device.

However, **Mr. Goldie soon became convinced that his Tie Plate was a failure.** When asked, "*And why did Dilworth, Porter & Co. abandon the sale of your Tie Plate?*" he testified: "*Because I became convinced from a consideration of the plate in use in track that it would not become a permanent success*" (Goldie Q. 40, R. Vol. 2, p. 798; X-Q. 125, R. Vol. 2, p. 808; Schleiter Q. 50, R. Vol. 2, p. 822).

In defendant's briefs, one counsel states that these Goldie plates "were manufactured in *substantial quantities* in 1892 and thereabouts, and went into successful commercial use." (Fish, Suppl. Bf. p. 55.) The other counsel states that these Tie Plates were "so satisfatory to the superintendent that he asked for more" (Elliott, R. Vol. 1, p. 252) and *probably* they "were sent to the road." (Reed, Main Bf. p. 58.) These statements are absolutely unjustified by the facts. *There is no proof* that they were sent, while on the other hand, Schleiter testified that *no* road gave any *repeat* orders, and that the Santa Fe only had the original lot of 1,000 plates. (Rec., Vol. 2, p. 819).

Even Elliott, the *sole witness* examined by the defense respecting the *utility and actual* work of the Goldie Tie Plates on the Santa Fe System, had to its defects, even on direct examination:

> "Q. 52. Going back a little, did any of these plates break?
>
> "A. Oh, yes, sir; they broke when heavy power came, some of them broke.

"Q. 53. Where did they break?
"A. *They broke right along the shoulder on the outside, crosswise.*"
(Elliott Dep. R. Vol. 1, p. 250.)

And on cross-examination Elliott admitted:

"X-Q. 239. A. Yes, sir, *they broke crossways at the shoulders.*" (R. Vol. 1, p. 264.)

The Goldie plate was a failure. Goldie so testified. He did not testify to any theory that in any way, shape or manner conflicted with the "law of the structure" or the *disclosure* of his patent drawing and specification. He merely testified to facts.

The fact is that Goldie suggested nothing of Wolhaupter's invention to the world. Neither the Goldie patent nor the Goldie plate point to Wolhaupter—rather by setting forth an entirely different theory of operation and disclosing a different structure, they *lead away from Wolhaupter.* It was abandoned by Goldie after it had been proved a failure and after the railroads had refused to give renewal orders for it. As a defense, the Goldie prior use is equally a failure and must be abandoned.

(i) Goldie Adopted Wolhaupter's Ideas.

Conclusive evidence that Goldie had no conception of the employment of a series of flanges will be found in the *inventive efforts of Goldie,* who was not only a prolific inventor, having taken out some seven patents on Tie Plates, but who as a contemporary of Wolhaupter, and who had his Tie Plates on the market. In the five Goldie Letters-Patent of a date earlier than the Wolhaupter patents in suit, No. 538,809, there *is no suggestion* of the employment of a *series of flanges* on the face of the plate on which the rail rests. *They all show a plate having a flat top.* These patents of Goldie are:

No. 426,530, April 29, 1890.
457,584, Aug. 11, 1891.
457,585, Aug. 11, 1891.
485,030, Oct. 25, 1892.
540,356, June 4, 1895.

(See Illustration, R. Vol. 2, p. 679.)

this latter patent being of a date later by one month than the Wolhaupter patent in suit No. 538,809.

Goldie 426,530 Apr. 29, 1890

Goldie 457,584 Aug. 11, 1891

Goldie 457,585 Aug. 11, 1891

Goldie 485,030 Oct. 25, 1892

Goldie 540,356 June 4, 1895

Wolhaupter 538,809 May 7, 1895

Goldie 610,179 Sept 6, 1898

Goldie 631,039 Aug. 15, 1899

In The United States Circuit Court For The Eastern Division Of The Northern District Of Ohio

The Railroad Supply Company Complainant

vs.

The Elyria Iron & Steel Company Defendant

No 7868

In The United States Circuit Court For The Eastern Division Of The Northern District Of Illinois

The Railroad Supply Company Complainant

vs.

The Horst Steel Company and Gould & S. Wolf Defendants

No 2294

Complainant's Exhibit No 138

Miller Sketch

Sworn to before me this 1st day of Nov. 1900

Notary Public

Not until after a Wolhaupter Tie Plate, manufactured under Letters-Patent No. 538,809, dated May 7, 1895, appeared on the market, did Mr. Goldie show a Tie Plate with *projecting flanges* on top of the plate upon which the rail rested. Then followed Goldie patents No. 610,179, September 6, 1898 and No. 631,039, August 15, 1899.

The sketch here produced (Exhibit No. 138), illustrates in cross-section each of the plates of the Goldie patents referred to, in the order of the date of their issue. From this, it will be perfectly plain that *Mr. Goldie had no conception* of the use on the upper surface of the Tie Plate of a *series of flanges* upon which the rail should rest or of a cutout groove, or of a "corrugated top" *until after he saw the* Wolhaupter Tie Plate having such a construction.

That is is quite proper to consider what the *subsequent* art has developed when inquiring into the inventive act of a given patent, was early recognized by the courts. The *effect* of the patented idea upon the subsequent art is often illuminative and, as in the instant case, persuasive upon the question of invention. Recognized among the most efficient and able patent judges of the Federal bench is the late Judge Blodgett (7th Circ.).

Referring to the Smith and Shannon patent in suit, and as one consideration moving him to uphold its validity, Judge Blodgett said:

> "That this was a substantial and useful improvement is shown by the large number of paperholders which have been brought before the public *since Smith and Shannon's invention*, which in all essential particulars embody their

device. The proof shows something *over thirty devices,* embodying substantially the Shannon device, *which have entered the field since his patent,* went before the public, showing that the public accepted this form of file-binder, or paper holder, as new and useful beyond anything of the kind before produced;".

(*Shannon* v. *Jones Sta. & Ptg. Co.,* 9 Fed. 205-6.)

"In view of the prior state of the art thus exhibited, it seems now to have been a very simple thing to do what was done by the patentees. * * * But the record in this case affords *extrinsic evidence of a most convincing kind* that what was done by the patentees was not an obvious thing, and that the change of organization was not one which the skilled mechanics of the particular art could have suggested and introduced without the exercise of inventive faculty.

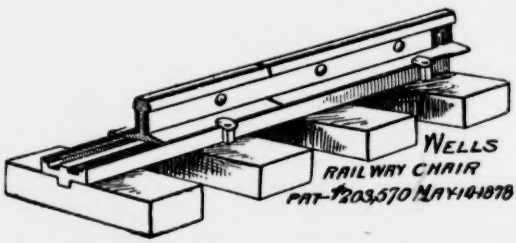
"This evidence is supplied, not only by the many patents for improvements, which fell short of producing the simple, compact, less expensive, and more efficient bearings of the patent, *but by the sterility, during 20 years, of the great army of mechanics employed by the various sewing machine manufacturers.* * * * It employed a vast number of skilled workmen. Yet to none of them did the suggestion occur which is embodied in the new organization of the patentees. The simple change made by the patentees has proved so valuable that the complainant has adopted it in more than 9,000,000 sewing machines. The sewing machine company whose president is the defendant in this suit has also adopted it. * * * We agree with the court below that these improvements were invention, and not merely the exercise of mechanical skill and adaptation."

(*Schenck* v. *Singer Mfg. Co.,* 77 Fed. 841; C. C. A. 2nd.)

The Sixth Circuit Court necessarily found the Goldie patent does not disclose the *combination* of Claim 8. Yet that court has held the patents of Wolhaupter to be invalidiated by the *prior art, as exemplified by Goldie.* This we respectfully submit, is reversible error.

(j) Wells Rail Chair Patent of 1878, No. 203,570.

This patent, No. 203,570, of May 14, 1878, is not for a Tie Plate but for a railroad chair shown as extending over four ties. It consists of a metal bar about *five feet long* (Faulkner, Rec. 470), having rail bearings extending longitudinally and with outer edges raised flush with the upper surface of the base-flange. A central rib "*e*", square in cross-section, located directly beneath the center of the chair, projects from the bottom of the chair. This lower central rib *3* is of such a size that it would be necessary to *manually cut out a sufficiently large portion of the tie to permit it to be inserted therein.*



The square under girder of the Wells chair would not imbed itself into the tie. The Wells chair extends over *four ties,* and this thick under projection acts as a *girder* between ties. The tie and timber expert of the Santa Fe System, Mr. Faulkner, testi-

fying for the defense, admitted upon cross-examination that the rib of the Wells chair *could not be forced into the tie by* the rolling weight of the passing trains *nor by any machine or apparatus with which he was acquainted,* nor without the tie being *"specially cut for that purpose."* Mr. Faulkner further admitted that such cutting of the tie would damage the tie. "OH, THE TIE WOULD BREAK; IT WOULD BE LIABLE TO BREAK." (Faulkner, R-X-Q 753-756, R. Vol. 1, p. 302.)

The Wells device, s[illegible] McElroy, is—

> "utterly unfitted [illegible] on account of its design and weight for use as a Tie Plate, and it would *not,* in my opinion, *suggest,* to say nothing of anticipate, the inventions defined by the claims in controversy of the Wolhaupter patent-in-suit."
>
> (McElroy, R. Vol. 2, p. 738.)

In the deposition of the expert, Miller, this court will find ample evidence to sustain our position and to agree with the conclusions announced by the Seventh Circuit Court of Appeals. Major Miller summed up his consideration of the Wells patent as follows:

> "I am, therefore, for the reasons above stated, of the opinion that *nothing in the specification or drawings* of the Wells patent No. 203,570, *suggests* that the inventor had any conception of the use of said railway chair as a Tie Plate, nor would it be possible to so use it *without a radical reconstruction and rearrangement of its parts which would amount to a new* device or for like reasons, I am of the opinion that there is nothing in the specification and drawings of this patent which would, at this date, May 14, 1878, suggest the construction

shown, described and claimed in the 8th claim of the Wolhaupter patent-in-suit, No. 538,809."

(Miller, R. Vol. 2, p. 653.)

Mr. Carter, defendants' expert, suggests that *if* the Wells chair be cut into short or Tie Plate lengths, and *if other structural changes* therein be made, it *could* probably be used as a Tie Plate. He admitted, however, that the Wells device *would not be practical* as a Tie Plate.

"In the sense of being commercially practicable it undoubtedly would not be, since the art furnishes so many devices which are obviously more satisfactory."

(Carter X-Q. 185, R. Vol. 1, p. 430.)

It must be remembered, however, that this brilliant idea of *reconstructing* and *redesigning* the Wells chair and of putting the reorganized device to a purpose entirely foreign to the use contemplated by Wells, himself, was only conceived by our opponents and this witness, *after the Wolhaupter patent in suit* had suggested to the world what form a proper commercial Tie Plate should be.

During the 17 *years' interval* between Wells and Wolhaupter, none of the thousands of the engineers, officials and skilled mechanics of the 1,300 railroads in this country, was able to or did modify the Wells chair into a satisfactory Tie Plate.

This court has said:

"The apparent simplicity of a new device often leads an inexperienced person to think that it would have occurred to any one familiar with the subject; but the *decisive answer* is, that, with dozens and perhaps hundreds of others laboring in the same field, it had never oc-

curred to any one before. *'The practical eye of an ordinary mechanic may be safely trusted to see what ought to be apparent to every one.''* (Italics ours.)

Potts v. *Creager,* 155 U. S. 597.

The Wells patented device does not respond to Wolhaupter's Claim 8. Its single lower rib with its flat under surface is not a device "more or less sharpened, adapted to engage and penetrate the tie." Nor is this thick, flat girder of Wells the equivalent mechanically or in function of sharp under ribs of Wolhaupter's Claim 8, which are more or less sharpened to *penetrate* the tie under the weight of the *passing train loads. This result cannot be attained by the Wells chair.*

The Sixth Circuit Court of Appeals in the Elyria case, adopting the theory of the defense, held in substance that the Wells rail chair *could be modified* as suggested and *as thus modified,* it was anticipatory. This is reversible error. But as Mr. Justice Lurton remarked (in *National Tube Co.* v. *Aiken,* 163 Fed. 258) it is "a long shot" from Wells to Wolhaupter—17 years long.

In *Clough* v. *Barker,* 106 U. S. 166, this court looked to the *"law of the structure"* of the alleged anticipating patent and found that:

> **"The STRUCTURE WAS NOT DESIGNED FOR THE SAME PURPOSE AS CLOUGH'S; no person looking at it or using it would understand that it was to be used in the way Clough's is used, and it is not shown to have been really used and operated that way."** (106 U. S 166.)

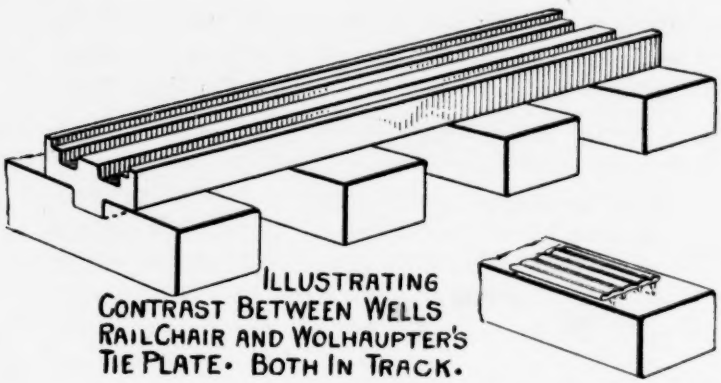
A prior patent, such as the Wells rail chair patent, for example, should be viewed in the light of

the state of the art at its date, to ascertain the *"law of its structure"* as disclosed, to ascertain how the device operated and what it *suggested as of its date*, as well as to determine what if any modifications would occur to a mechanic without exercising inventive ingenuity.

It is one thing for a patentee to slightly modify or change his construction for *commercial* purposes, and quite another thing to take a *specific disclosure* of a prior patent or printed publication, and *to assume a modification thereof in the light of subsequent developments* (introduced by the patent in suit), and then to hold that, *as thus modified*, the prior publication or patent is an anticipation.

In a later case, Mr. Justice Brown, speaking for this court, said:

> "While it is possible that the Stringfellow and Surles patent might *by a slight modification* be made to perform the function of equalizing the springs which it was the object of the Augur patent to secure, *that was evidently not in the minds of the patentees, and the patent is inoperative for that purpose.* Their device evidently *approached very near* the idea of an equalizer; but their idea did not apparently dawn upon them, nor was there anything in their patent which would have suggested it to a mechanic of ordinary intelligence, *unless he were examining it for that purpose.* **It is not sufficient to constitute an anticipation that the device relied upon might, by modification, be made to accomplish the function performed by the patent in question, if it were not designed by its maker, nor adapted, nor actually used, for the performance of such functions.**" (Italics ours.)
>
> *Topliff* v. *Topliff*, 145 U. S. 156.



ILLUSTRATING CONTRAST BETWEEN WELLS RAILCHAIR AND WOLHAUPTER'S TIE PLATE. BOTH IN TRACK.

No one may properly *assume* that the Wells chair could be used as a Tie Plate, no such suggestion being found in his patent. His lower rib, for example, is a strengthening bar or *girder*. The Wells chair extends over several ties. If Wells had intended that this lower projection should function as a tie engaging rib *only*, as a Tie Plate rib is used, he would not only have shaped it differently, but he would *not have extended* it under *the whole length* of the chair, thus increasing the weight and cost of the device. There is nothing to suggest its use as a tie penetrating rib. It is blunt, not sharpened.

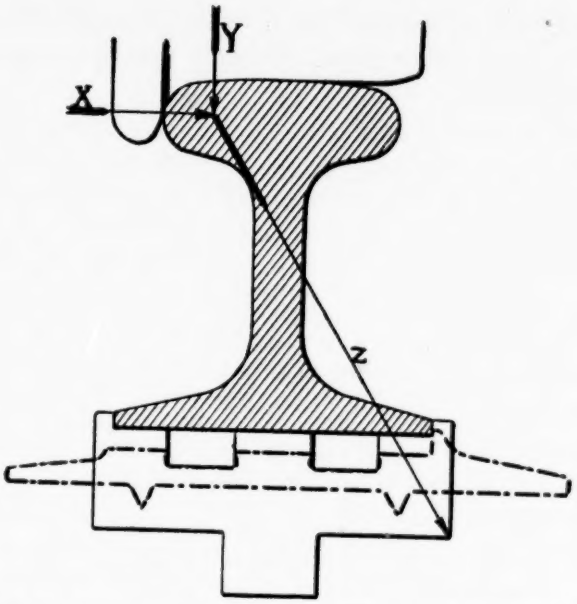
This square shaped, lower flange or girder extends not only under those parts which cover the ties, but *also under those parts which are between the ties.* Wells wanted strength in his chair *when the train load was exerted between the ties.* His whole thought was to prevent buckling of his long chair between its ends.

To prevent this, the Wells' patent states that the lower rib "serves to impart increased

strength and stiffness to the *central* portion of the chair." And, again, that it adds "to the *longitudinal rigidity* of the chair" (Rec. Vol. 3, p. 1088).

Again, in the Wells device there is no rail engaging shoulder projecting above the top of the plate and at the same time located or positioned inside of the margin of the plate to *prevent rail canting.* The Wells shoulder is at the margin of a relatively narrow and relatively high structure, one which, by reason of the side thrust of the passing train loads, would *tend to turn over or cant* upon its lowest point, as upon a pivot. *To prevent this, there should be a bearing surface outside of the outer vertical wall of the shoulder of the Wells chair.* In other words, a Tie Plate must lie flat on the tie, and have no tendency to roll or cant.

The following illustration shows this idea, graphically, and demonstrates why it would be necessary to have a wide Tie Plate bearing surface, part of which should be *outside* of the line of application of the two forces—the downward and the side thrusts.



The dotted lines in this figure show that a relatively wide plate, such as the Wolhaupter Tie Plate, made out of the Wells rail chair, would not be due merely to the application of equivalents or mere mechanical skill, but would require a complete reorganization, redesigning, reconstruction, of the Wells structure *upon different lines* and for an *entirely different purpose.* It would be not merely a mechanical change but "a functional change due to a conception of a different plan."

It will be manifest, therefore, to convert any portion of the Wells device into a Tie Plate, one must indeed reconstruct and redesign the Well chair. One must DEPART ENTIRELY from the design and purpose Wells had in mind and must proceed to a

totally different result, by a totally different structure having functionally different features to produce a Tie Plate.

The Court of Appeals for the Fourth District, in the Bottle Stopper case, following the rule laid down by this court used very characteristic language in its opinion:

> BRAWLEY, D. J. "It does not follow that the inventive idea is the same, because it employed a metallic element and an elastic element to accomplish the same purpose; for if terms are employed to avoid defining the distinctive character of the device or imperfectly describe it, few patents would escape anticipation, for nearly all employ the same elements. The imagination may find in Young's 'disc of sheet metal' the cup-shaped disc of Painter; *for men are prone to see what they want to see.* Polonius saw in the cloud first a camel, then a weasel, and then something 'very like a whale,' as Hamlet bade him. Taught by Painter, we can see that a 'disc of sheet metal' may be converted to a purpose altogether different to that which Young conceived, not by a mere mechanical change, but by a **functional change**, due to a **conception of a different plan.** * * *"
>
> "The mechanical skill which may be invoked to exclude the idea of invention **must be mechanical skill applied in accordance with the direction of the alleged anticipating patent;** not the skill which, taught by the invention in suit, seeks to reform and reorganize the former patent, so disguising it under a cloud of subtlety of argument and suggestion as to transform it." (Italics ours.)
>
> *Ideal Stopper Co.* v. *Crown Cork & Seal Co.*, 131 Fed. Rep. 244-255, C. C. A. 4th.

A very significant fact was disclosed at the taking of Mr. Carter's deposition. Counsel for the

defendants desired to have *models constructed* to illustrate the Wells device. A copy of the Wells patent was sent to the Santa Fe Railroad for that purpose. **The result was two aluminum models each five feet long**, but Mr. Carter, defendant's expert, refused to use a *five-foot model* and insisted upon having a few inches cut from it to *simulate* a Tie Plate in size at least.

The *significant circumstances* is that mechanical skill produced a "Chinese copy" of the five-foot chair of the Wells patent and that the *Wells patent did not suggest to either the engineers of the Santa Fe, or to the defendants, or to any of defendant's numerous counsel,* **even during this litigation,** *the short length Tie Plate form.* Evidently, the Wells patent may not fairly be said to *suggest* any feature of Wolhaupter's inventions.

There is a superficial resemblance to Wolhaupter in the Wells patent, but *it is merely superficial.* It does not follow, however, that there is any identity of *concepts* or of *inventive* ideas for, manifestly, each inventor was guided by a different purpose and worked out their respective concepts upon fundamentally different plans.

—In the Supplemental Brief, counsel states:

> *"If a few ounces can be saved on each Tie Plate, that means a saving of many dollars in the aggregate cost of the Tie Plates. To make the Tie Plates cheaper, superfluous metal should be eliminated."*
>
> (Fish, Suppl. Bf., p. 15.)

In the Wells' rail chair, even if we have a section of Tie Plate length, cut off for use as a Tie Plate

(a suggestion first made by Carter, only because of the exigencies of the defense), one will have a plate, the price of which would be absolutely prohibitive.

The error of the Sixth Circuit Court is all the more clear, however, when one reads the contrary and later opinion of the Seventh Circuit Court of Appeals rendered as stated in the opinion, only after that court had given to the Sixth Circuit Court "great weight in our consideration of the case."

The Seventh Circuit held that in its opinion, it was:

> "a clear departure from the law of the structure to cut from Wells' chair a piece the width of a tie and then call the rib or girder E a device in a Tie Plate adapted to engage and penetrate the tie. * * * Wells never had in mind, and the record does not show that the railway chair art was ever concerned with, overcoming the emery-like grinding and cutting action upon the tie or upon armour on the tie as that action is brought into play upon the ties successively by the wave motion of the track." (Opinion, C. C. A. Hart case, R. Vol. 3, p. 1418.)

And then, in applying this structure to Claim 8 of the Wolhaupter patent, with respect to the defense of anticipation, and of non-invention and mechanical skill, the Seventh Circuit Court further held:

> "The claim is for a combination, and it is very evident that the devices of both Hudson and Wells would have to be redesigned, reorganized and rebuilt in order to bring into existence the combination of Claim 8. That something more than the skill of a mechanic who was acting in the line of the teaching of these patents was required to produce the efficient Tie Plate of Claim 8, might be inferred

from the great lapse of time between Hudson and Wells and the disclosure of Wolhaupter, * * * never prior to Wolhaupter had the Tie Plate of Claim 8 been produced. And since then the entire development has been along the line of improving the Tie Plate of Claim 8.

"If the redesigning and reorganization of the rail chairs of Hudson and Wells was so obvious, why did not some one of the many men who were interested in the improvement of the roadbeds of the 1,300 railroads of our country, bring forward this combination which has proven to be so desirable?"

(Opinion, C. C. A. Hart case, R. Vol. 3, pp. 1418-9.)

We respectfully insist that when the Sixth Circuit Court asserted as it did in effect, that it required nothing but mechanical skill to redesign and reorganize the Wells patent, it failed to consider that such mechanical skill had to be *"applied in accordance with the direction"* of the Wells patent, and that the court failed to consider the fact that others, whose interest it surely was to develop a practical and satisfactory Tie Plate, had failed to see in the Wells patent that which that court found to be revealed therein.

"The eye that sees a thing already embodied in mechanical form gives little credit to the eye that first saw it in imagination, but the difference is just the difference between what is common observation and what constitutes an act of creation. The one is the eye of inventive genius, the other of a looker-on after the fact."

Faries Mfg. Co. v. *Brown*, 121 Fed. Rep. 547.

The thousands of persons and the thousands of skilled engineers and mechanics of the 1,300 steam railroads of this country, who looked at the Wells patent never dreamed that a small section could be cut off, redesigned, rearranged and then made to perform a totally different function from that of the Wells *girder* strengthened rail chair, or that it could be used as a Tie Plate.

> "But it is plain from the evidence and from the very fact that it was not sooner adopted and used, that it did not for years occur in this light, even to the most skillful persons; it may have been under their very eyes; they may almost be said to have stumbled over it; but they certainly failed to see it, to estimate its value and to bring it into notice."
>
> *Loom Co.* v. *Higgins*, 105 U. S. 850.

"Prophecy after the event is easy prophecy."

As was remarked by Mr. Justice Blatchford of a similar situation, the defense here is:

> "The oft-repeated story of belittling the invention."

The Wells patent must fail therefore, as an anticipation, the earnest arguments in the Main and Supplemental Briefs to the contrary, notwithstanding.

Excepting for the fact that counsel has illustrated certain prior art patents other than those hereinbefore referred to (Reed, main Bf., pp. 45, 49, 50 and 62), we would not, in view of the admission of the expert, Carter, as to what constituted the best references, further consider the prior art patents. We make, however, brief reference thereto as follows:

(k) Wolhaupter Patent of 1897, No. 579,509.

The statement is made, referring to the Wolhaupter patent, No. 579,509, issued March 23, 1897 (R. Vol. 3, p. 1294) that "Carter says that this is a complete disclosure of all the features of the second Wolhaupter patent" (Reed, main Bf., p. 62). An examination of this patent would almost seem to be sufficient to negative this unfounded assertion. This Wolhaupter patent, later than the first Wolhaupter patent in suit, is not cited against the third Wolhaupter patent in suit, but only against the second patent in suit. It will be seen that after the plate of Patent No. 579,509 is rolled in bar form and cut into lengths, that tie engaging projections are *punched* from the central portion and pressed downwardly below the bottom surface of the plate to form V-shaped projections adapted to enter and engage the tie. These projections, however, are *not directly under, nor substantially beneath* any rail supporting flange projecting from the upper surface of the Tie Plate. This patent, therefore, fails to show the one essential element of each of the claims 1, 2 and 3 of the second Wolhaupter patent in suit, No. 691,-332. It therefore cannot anticipate said patent (Miller Dep., R. Vol. 2, p. 673; McElroy, Vol. 2, p. 757).

(l) Gould Patent of 1883, No. 280,030.

Counsel has illustrated in his brief the aluminum model (Exhibit 0-20) *of a portion* of the device of the Gould Patent, No. 280,030. Having thus undertaken to mislead this court by showing a *part* as though it were the whole device, counsel states:

> "A comparison of this device with that of the defendants' Tie Plate shows the closest resemblance. Carter says that this base plate has all the characteristics of a Tie Plate and exhibits an upper lateral shoulder, grooves across the upper surface, rail bearing flanges or surfaces and lower tie-engaging projections."
>
> (Reed, Main Bf., pp. 45, 46.)

This patent is to be found in the record, Vol. 3, at page 1098. It will there be seen that the grooves, which are illustrated in the main brief (p. 45) in the top surface of the plate, are *grooves intended to be completely filled by lower projections on the bottom of the rail* (see Figs. 4 and 5, Gould Patent, Vol. 3, p. 1598), *when the device is in use in track.* On top of this plate and between the grooves the patent discloses "a rubber plate or cushion *f* enclosed between the beads *a*" on the bottom of the rail (lines 69, 70, column 2, Pat. Spec). *The base of the rail does not rest upon the top of the plate, but upon the rubber cushion f.*

There is no "series of rail abutting shoulders" or supporting surfaces either in the same plane as the top surface of the plate nor as "flanges" raised above the top surface. Moreover, there are no grooves intermediate any such rail supporting surface. The *only grooves* appearing in this Gould de-

vice are those designated in the patent by the letter *b*, and these are intercepted grooves in that when the rail is in track, the *beads a of the rail completely fill the grooves b* (Miller, Vol. 2, p. 653; McElroy, Vol. 2, p. 739).

There is nothing anticipatory in this Gould patent and as to the misleading, unfair illustration on page 45 of defendant's main brief, we may almost be justified in stating that it is unethical and unprofessional.

(m) Holmes Patent of 1894, No. 514,465.

The illustration of Fig. 1 of this patent (Reed, main Bf., p. 50), also, will be misleading unless the patent specification is examined (Rec. Vol. 3, p. 1211). We again call attention to counsel's attempt to mislead the court by the use of the following statement in the brief in connection with said illustration:

> "This combination or double plate shows a lower plate with rail abutting side flanges, upper surface pockets and rail bearing flanges and lower tie engaging flanges parallel to the grain of the tie." (Reed, main Bf., p. 50.)

Counsel does not correctly describe this plate. This is a *two-part device*, consisting of the members lettered A and B. The lower portion is the part A, with its three downwardly projecting tie-engaging flanges. It is illustrated bottom side up in Fig. 3 of the patent drawing (Vol. 3, p. 1211). Therein are shown two punched out rectangularly shaped cavities letter *a'*. The second part or upper member B of the combined structure is illustrated also bottom

side up in Fig. 2 of the patent drawing (Vol. 3, p. 1211). In Fig. 1 (that illustrated in the main brief, p. 50) the two plates, A and B, are shown in juxtaposition. When thus placed together, the *rectangularly shaped projections cc,* depending from the bottom of the upper plate B, *enter and completely fill the spaces or punched out portions a'* of the lower plate. Thus it is quite inaccurate for counsel to state that this combination plate shows "upper pocket surfaces," because when the two parts of the plate are combined in use, the pockets *a'* completely disappear.

It is equally untrue for counsel to state that this combined double plate shows "rail bearing flanges" because when the two parts, A and B, are seated together to form the Tie Plate described in the Holmes' patent, and are thus spiked to the rail, the two parts are securely fastened to each other and *present a substantially smooth upper surface for the rail to rest upon.* Clearly there are no projecting flanges on the upper face of the structure of the Holmes' patent for the rail to rest upon (Miller, Vol. 2, p. 666; McElroy, Vol. 2, p. 750).

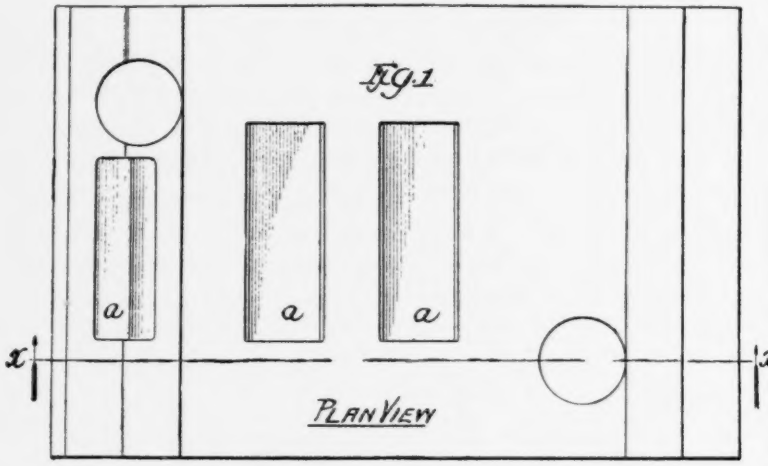
(n) Prior Printed Publications.

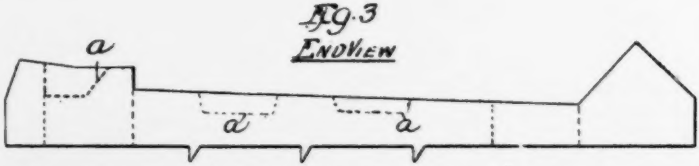
1. In the main brief, counsel illustrates an aluminum model, introduced in evidence by the defendant, of his Exhibit D. D. D., illustrated on page 961 of Vol. 3. This is a drawing made from Vol. 9 of the Railway Gazette, issued September 30, 1887. The Exhibit D. D. D. *does not correspond* with the aluminum model, Defendants' Exhibit 0-24, nor with the

illustration thereof in defendants' brief (Reed Bf., p. 53). Defendants' pictures may mislead the court. The aluminum model and the illustration just referred to do show two intermediate grooves in the top surface of the plate. The Railway Gazette, Defendant's Exhibit D. D. D., **did not show two or any other number of such grooves.** Fig. 8 of Exhibit D. D. D., shows two *dotted lines,* indicated by the reference letters, *a, a.* These are *called* a groove in the article in the Railway Gazette, but they are mentioned as "adapted to lighten the plate" being taken out at a "*point* where the metal was not needed."

The matter was considered and our position confirmed in the deposition of plaintiff's experts, Miller (Vol. 2, p. 684) and McElroy (Q. 10, Vol. 2, p. 768).

A plan view correctly showing the weight saving cavities (Ausparrungen *a, a*), is shown in the Miller sketch in correction of defendant's Exhibit D. D. D., *marked complainant's Exhibit* 140, appearing opposite page 694, Vol. 2 of the record, but indexed as page 1075 of the record.





In The United States Circuit Court
For The Eastern Division Of The
Northern District Of Illinois

The Railroad Supply Company
Complainant
vs.
The Hart Steel Company
Inc
Guilford S. Wood
Defendants

No. 2929

In The United States Circuit Court
For The Eastern Division Of The
Northern District Of Ohio

The Railroad Supply Company
Complainant
vs.
The Elyria Iron & Steel Company
Defendant

No. 7,668

Complainant's Exhibit No. 14
Miller Sketch
In Correction Of
Defendants Exhibit D.D.D.

6-25-1910

Notary Public

We are confirmed in our position by the statement made by Mr. Carter, defendants' expert, in answer to X-Q. 14, in which he stated:

> "A pocket not extending clear across the plate would not properly be called a groove. Such a pocket, however, to answer your real inquiry, *would have been properly indicated* by the *dotted lines* shown in Fig. 7."
>
> (R. Vol. 1, p. 520.)

It is insisted that the dottel lines, indicated by the letters *a, a,* merely indicate *enclosed pockets within the area* of the plate *and do not indicate grooves* or channels, such as Wolhaupter's extending from side margin to side margin of the plate. It is also clear that the word "groove" in the text of the Railway Gazette *was a mistranslation of the original article in the German language* of which the Railway Gazette article pretended to be a translation. It being so perfectly manifest to any one familiar in the art of reading drawings, that the *dotted* lines in Fig. 8 mean weight-saving cavities and not a groove,—the plaintiff obtained an original copy from Germany of the article from which the Railway Gazette article and illustration were taken. This article was introduced in evidence during the deposition of Dr. Mason. It is spread in full in the original text, at Vol. 2, pp. 1313-17, following page 834.

A careful and accurate translation of this article into English is found in the answer of Dr. Mason to Q. 6, beginning at page 831 (Vol. 2). The original article was by the engineer of the Netherland State Railway Co., Mr. J. W. Post, who was describing

not only the Tie Plates in use, but certain changes and modifications that were *proposed* to be used in the future.

The original article made no mention of grooves, as does the Railway Gazette article, but clearly referred to cavities and an inclosed depression in the face of the plate and underneath the rail. The original text is to be found in lines 1, 2 and 3, column 2 of the article in German, Vol. 2, p. 1317, reading as follows:

> "Vie gehoriger dicke der Platte kann durch Ausparrungen a, a (Fig. 9) etwas wenn auch nicht viel, ann gewicht erspart werden."

This sentence translated, is

> "Using a plate of sufficient thickness, a certain amount, if not much of the weight, can be saved by means of weight saving cavities a, a, Fig. 9." (See lines 7, 8 and 9, R. Vol. 2, page 834.)

It is true that in a preceding question, Mr. Carter states that the dotted lines indicated to him, as a mechanic, that they were grooves intended to extend clear across the plate. But this opinion is quite emasculated by the next sentence in which he states his reason:

> "If they had been mere pockets or recesses, not extending clear across the plate from margan to margin, some such term as 'pocket' or 'recess' rather than the term 'grooves' would have been the natural one for the mechanic to employ in describing them." (Carter, X-Q. 13, Vol. 1, p. 520.)

The fallacy of this statement, however, is shown by the fact that the word "grooves" *was not used*

by the mechanic, J. W. Post, *in the original article,* but was used as mis-translation of the German word "Ausparrungen" by the non-mechanical reporter or member of the staff of the Railway Gazette, in which article the word "groove" first appeared. Nothing more need be said to discredit Mr. Carter.

(2) Defendant's Exhibit L. L. L.

The two illustrations on page 55 of the main brief are of aluminum models improperly illustrating another exhibit, to wit, Defendants' Exhibit L. L. L. (Vol. 3, p. 965). Counsel in the brief points out that in the Tie Plates or rail chairs of which these models purport to be reproductions "a central groove or channel across the plate" appears on the top of the rail bearing surface (page 55). We ask the court, however, to look at the drawing introduced in evidence on page 965 of Vol. 3, before accepting the statement of counsel, on page 55 of their main brief as being correct, because that drawing will show counsel to be once more in error.

This drawing (Rec. Vol. 3, p. 965), it will clearly appear, is a *sectional* view and *not an end view or side* view of the plate,—the section being taken on a transverse line drawn through the center of the spike holes. It will be observed that the spikes are screw spikes and are shown in complete elevation. It is true that *in this section,* a *cavity* appears beneath the base of the rail. The *end* of the rail, however, appears in the top view, marked 634, of the drawing, and *no such cavity appears.* This demonstrates that there is *no channel or groove that ex-*

tends across to the margins as in the Wolhaupter Tie Plate.

The fact of the matter is that *in the center* of the plate, *midway of its two side margins,* there is a *small recess* or cavity, bounded by four walls. This cavity *does not extend* to the edges of the plate. The *aluminum models,* therefore, are *incorrect and misleading.* This is pointed out in the deposition of complainant's expert, Miller (Vol. 2, p. 628). Their reproduction in the brief is likewise misleading and, seemingly, are intentionally unfair.

(3) Defendant's Exhibit K. K. K.

In the main brief, on page 56, counsel illustrate what purports to be the second illustration on page 635 of the publication, "Das Eisenbahn Geleise," and which was introduced as Defendants' Exhibit K. K. K. Again counsel attempts to mislead the court, because *this device does not have a groove extending from side margin to side margin of the plate.* The space underneath the rail in defendant's main brief (page 56) is simply a circumscribed cavity in the face of the plate and is not a groove or channel that extends from side margin to side margin. This is clearly seen in the Miller sketch in correction of Defendants' Exhibit K. K. K., marked "Complainants' Exhibit No. 141," which appears in front of page 695 of Vol. 2 of the record, although indexed as page 1077.

IX.

ERROR OF SIXTH CIRCUIT COURT RESPECTING INTERPRETATION OF THE CLAIMS IN ISSUE.

(a) Patent No. 538,809.

Contrary to the definite terminology of Claim 8, which alone is in question, the Sixth Circuit Court of Appeals decided that the essential idea of Wolhaupter's invention consisted in "providing a plate having on its under side a series of stepped flanges or projections arranged in a diagonal line with respect to the rail flanges." (Opinion, R. Vol. 3, p. 1391.)

In the specification, Wolhaupter does not use the word "prime" or "first" or "principal" as applied to the objects of his invention; nor does his patent disclose only "one essential" inventive idea. In lines 13 to 41, page 1, of the patent specification, Wolhaupter pointed out certain defects in Tie Plates of the prior art, but not all of the difficulties to be removed. In lines 50 to 59, inclusive, of the specification, he points out **one of the objects** that he had in mind in producing his invention. In lines 60 to 65 of the patent, he pointed out **another object of his invention**, and in lines 66 and 67 he pointed out that the invention consisted in the **combination** of devices "hereinafter described and **claimed.**"

All that part of the specification beginning with line 74, on page 1, and extending down to line 32 on

page 2, *deals only* with the subject-matter of Claim 8. This Claim 8 refers to the *first* stated feature of his invention, as will be manifest upon reading the paragraph contained in lines 33 to 45, inclusive, p. 2, where the patent states:

> "I will now describe the *second* feature of the invention, viz.: the ability to adjust the plate to take up any widening of the gauge due to the lateral movement of the plate and rail."
>
> (Wolhaupter Pat., R. Vol. 1, p. 13.)

It may be that the Sixth Circuit Court was confused and mislead into considering, as relating to the entire disclosure of the patent, one clause of the specification reading as follows:

> "In all of the above named variations, the principle employed is the same, and each would embody the essential idea of my invention, which consists in providing a plate on its under side with a series of stepped flanges or projections, that is to say—flanges or projections arranged on the diagonal line with respect to the rail flange." (R. Vol. 1, p. 14.)

This language *does not* and was not intended to apply to the first stated object of the invention, to wit: that covered by Claim 8. The context shows that it was used and intended to be used with reference to the stepped arrangement only, and to the various modifications thereof, especially designated as the second feature of his invention in line 33, page 2, and line 10, page 3 of the patent specifications. The phrase "essential idea of the invention" (lines 14, 15, page 3) necessarily related entirely to the second feature of his invention, of which several modifications were described.

Wolhaupter did not affirm, and his specification does not state that the stepped, flange arrangement was the essential idea of his whole or entire invention.

Manifestly, Wolhaupter set forth two distinctive inventive concepts in his first patent: the one covered by Claim 8, the other covered by the remaining claims. He could have had two separate patents for that which is now contained and claimed in this single patent. In one of these he could have had Claim 8, with the description of the first feature of his invention, to wit: the subject-matter contained in line 74, page 1, to line 33, page 2. In the other patent, he could have placed the remaining claims and the remainder of the description. In both patents, the descriptions and claims could have been based upon the same drawings.

In such event, no court would have deemed it necessary to limit the patent containing Claim 8 by reading into it the construction shown in the drawing and on which the claims of the other patent were based. These two inventions are no less independent and distinct because they happen to be embraced in the same patent grant instead of in separate patents.

In the Elyria case, the Court of Appeals pointed out that Claim 8 was broad in its terminology and rightfully stated that

> "No *limitation* by the drawings or the specific form of description can be imported into it without making it *identical* with some one or more of the other claims."
>
> (Opinion, Elyria case, R. Vol. 3, p. 1395.)

Claim 8 is not limited to the particular "arch and girder" construction shown, since that particular

form and construction is specifically covered by Claim 10. Claim 10 is not in issue. Neither is Claim 8 limited to a "series of stepped tie engaging flanges," as that specific arrangement is covered by Claims 1 to 7 and 14, which are not in issue. Neither is Claim 8 to be limited to one having "at least four spike holes arranged in pairs in diagonal corners of the plate" as that specific arrangement is covered by Claim 13 of the patent, and is not in issue. The new thing claimed in this Claim 8 is the series of three or more elevated rail supports in combination with the lower tie-engaging projections, more or less sharpened. This specific combination, as broadly stated in Claim 8, is what distinguishes that claim from the other claims of the patent.

If, as between Claim 8 and the other claims of Wolhaupter's first patent, no differentiation be possible, and it is necessary to read into Claim 8 features of construction and elements which the patentee and the Patent Office deliberately omitted, then the patent would have two claims of the same tenor and scope. It is axiomatic that no man may have in the same or in different patents, two claims for the same thing—two claims identical in scope and meaning. Manifestly no such highly technical construction should be given if Claim 8 may be otherwise consistently construed. The construction put upon it by the Sixth Circuit Court was not only erroneous but was:

> "opposed to the general rule of construction, applicable where there are several claims, to the effect that if some of the claims are limited to details, those which remain are, *prima facie* not to be fettered by insisting that they contain

as necessary elements, the particulars which are specifically covered elsewhere."

Bresnahan v. *Tripp, G. L. Co.,* 102 Fed. 889; C. C. A. 1st Cir.

The mere fact that the broad Claim 8 covers the first stated object of the invention and does not contain limitations, such, for example, as "a series of stepped flanges," or to the "arch and girder" form, or to the "depth" of the groove, or to the height" of the flange, etc., is the very clearest evidence of an attempt on the part of the patentee to obtain and of the intention on the part of the Patent Office, to grant, a broad, basic patent, unlimited, so far as Claim 8 is concerned, and to secure the other features of the invention by the remaining claims. Where claims are clear and distinct, they should be differentiated and given the meaning plainly intended by the patentee and the Patent Office.

This court has consistently followed and reaffirmed the rule governing the interpretation of patent claims, announced in *Winans* v. *Denmead,* 15 How. 330 [and which nearly fifty years later, in *Western Electric Co.* v. *LaRue,* 139 U. S. 601, this court said *"had always been the rule"*] to wit:

> "While it is undoubtedly true that a patentee may so restrict his claim as to cover less than what he invented, or may limit it to one particular form of machine, excluding all other forms, though they also embody his invention, yet such an interpretation should not be put upon his claim, *if it can fairly be construed otherwise.*"
>
> *Winans* v. *Denmead,* 15 How. 330-341.

That claims should be liberally construed, and "so interposed as to uphold and not to destroy the right of the inventor" was held in *Turrill* v. *Railroad Co.*, 1 Wall. 491. It will be of no value or advantage to the Railroad Supply Company if this court should hold Wolhaupter's patents valid and by a narrow construction of the claims, hold non-infringement and allow these defendants to use his invention. The shell without the kernel would be of no value.

To interpolate into Claim 8 [as did the Sixth Circuit Court] "any thing which it did not contain" would be wrong, as this court ruled in *Rubber Co.* v. *Goodyear*, 9 Wall. 788, and cause this inventor to "lose the fruits of his genius and his labors." and where, the court is considering Letters-Patent "in a liberal spirit," as this court has repeatedly held should be done, "the construction claimed by the patentee himself," should be adopted "if this can be done consistently with the language which he has employed," [*Klein* v. *Russell*, 19 Wall. 433], and in a case of doubt, and where "the claim is fairly susceptible of two constructions, that one will be adopted, which will preserve to the patentee his actual invention."

McClain v. *Ortmayer*, 141 U. S. 419-425.

Mr. Justice Brown, one of the most learned expounders of the law of patents said:

> "The object of the patent law is to secure to inventors, a monopoly of what they have actually invented or discovered, and it ought not to be defeated by a too strict and technical adherence to the letter of the statute or by the application of artificial rules of interpretation."

Topliff v. *Topliff*, 145 U. S. 156-176.

It may be true that Wolhaupter, at the time he applied for this patent, had an exaggerated idea of the importance of the adjustable or stepped flange feature. Whether he did or not cannot counteract the undisputable proof of what really occurred, namely: the immediate recognition and introduction of the Tie Plate covered by Claim 8, without the stepped flanged.

This fact may not be lightly cast aside. The real purpose of the patent laws is not merely to encourage inventors and give them a monopoly upon something new which they have produced. Back of all this lies the basic idea of a patent which, while providing a reward for the inventor, shall also confer some benefit upon the public. The language of the constitution authorizing the patent system is that in order to "promote the progress of sciences and the useful arts, Congress may," etc. Utility is as essential as novelty, and both must be present in every patented device; else there can be no invention. To give the public a Tie Plate which it did not have before and which would produce beneficial and useful results, was what Wolhaupter was aiming to accomplish and what he did accomplish. He came into the field with a Tie Plate which had two distinct features: one theoretical and more or less practical, and the other distinctly and undisputably practical. The latter, as defined by Claim 8, was at once adopted and used.

We respectfully submit that the Seventh Circuit Court in the Hart case was right and should be affirmed, and that the Sixth Circuit Court in the

Elyria case was wrong and should be reversed, with respect to the consideration and interpretation of Claim 8.

(b) Patent No. 691,332.

As to Wolhaupter's second patent, it is respectfully, but earnestly insisted, that the Court of Appeals for the Sixth Circuit erred by improperly applying the prior art. That court properly found that "the leading purpose" of this patent is to locate the tie-engaging flanges *directly beneath the rail-sustaining flanges;* but it improperly held that this purpose was disclosed in the patent to Goldie, No. 485,030.

In this opinion there was a segregation of elements; and by *aggregating* features found in the prior art and ignoring the inventive *concept* of Wolhaupter, that court failed to follow and apply the well settled canons of patent law. *Imhaesuer* v. *Buerk,* 101 U. S. 647; *Parks* v. *Booth,* 102 U. S. 96, and many other cases, *supra,* p. 20 (b). We submit this is reversible error. Such segregation or analysis, however, will not bear investigation in the light of the evidence in the case. The prior patents, being more fully considered herein, in the chapter on the prior art, will only be referred to generally at this point.

It was clearly erroneous to use the Goldie patent, for example, as a reference. It is true that Goldie and Wolhaupter both show thin plates of extended arc; it is also true that both located the tie-engaging flanges paral-

lel to each other and at the outer edges of the plate, *but here the resemblance ceases.*

Goldie had *no corrugated or grooved top.* He had a plate of *uniform cross sectional thickness throughout,* with a slightly curved depression to receive the curved base of a rail. No other thought was present in Goldie's mind. No other idea is expressed in his patent. No other information is given to the public by him. He had no rail support other than the slightly curved surface at the center of his plate and the flat surfaces on either side thereof. These flat surfaces on the top of his plate are not flanges—certainly they are not *raised* surfaces or flanges standing above the top surface or body of his plate —for they are a part of this top surface.

Goldie's Tie Plate, when used with a flat bottom rail, was *promptly ironed out or flattened like a sheet of* blotting paper. It became a *flat plate* upon the passage of the first train over it. The two physical exhibit Tie Plates, B and C, introduced in evidence, show that the Goldie plate was flattened out in use in the track. Goldie intended that it should be and it was. The Sixth Circuit Court failed to heed the very clear and positive evidence on this point in the record.

Contrast this now with Wolhaupter's idea, expressed in the second patent, viz.: an arrangement of upper flanges and lower ribs to provide a plate with a distinctly corrugated top, having raised rail supporting flanges, forming narrow rail supporting ledges with intervening grooves, combined with a plurality of tie engaging flanges on the bottom of

the plate, *located immediately below the rail seats!* Here we have Wolhaupter's idea embodied in a practical Tie Plate as distinguished from the Goldie device which the testimony, including that of Goldie, himself, declares was ineffective and *was abandoned.*

The Sixth Circuit Court brought to its aid, also, the Reece and the Holmes' patents, which the opinion says provide "a series of stops or abutments or flanges on the upper surfaces of their respective devices to receive the outward bearing of the foot flanges of the rail." The court also referred to Wolhaupter's first patent as an anticipation.

The Sixth Circuit Court *here aggregates four references* to find the combination described in the claims of Wolhaupter's second patent. This method of anticipation is wrong and has been repeatedly condemned by this court. The grouping together of references to separate features of the prior art, in the *light of the disclosure of the patent in suit,* not only ignores well established and settled rules, but also violates the elementary rule for the construction of written documents, viz.: that the court should place itself in the position of the parties to an agreement, in ascertaining its meaning, and disregards the "law of the structure" rule announced in *Clough* v. *Barker,* 106 U. S. 166. Such reasoning, as was applied by the Sixth Circuit Court, would destroy the majority of patents coming before any court.

The invention of Claims 1, 2 and 3 of this second Wolhaupter patent are limited to an improvement upon the first Wolhaupter patent, which covered

the combination of a series of upper flanges with under ribs. The second patent as an improvement is a carrying forward of the invention of the first patent. It is limited to the shifting of the relative positions of these two elements *so that they shall be in vertical alignment the one with the other,* thereby producing, admittedly "beneficial results."

We do not ask to have this second Wolhaupter patent broadened by judicial construction in order to hold infringement. It is infringed, manifestly, even when a strict interpretation is given to the terminology of its claim. It was reversible error to broaden this second patent by construction and then anticipate it as thus broadened. That is what the Sixth Circuit Court did. That is one of the errors in the Elyria case which we believe this court will, in justice, correct.

The whole question with respect to the second patent must be whether or not any patentable ingenuity was displayed in bringing the two clearly patentable elements of the first Wolhaupter patent into a new juxtaposition and relation, namely: into a position where the rail bearing flanges above the top of the plate shall be in vertical alignment with the sharpened tie-penetrating ribs that project from the bottom of a plate. That is the sole question.

It is said that this mere shifting of the upper flanges and the lower ribs so they shall be in vertical alignment is simple, too simple to rise to the dignity of an invention. It produced "new and beneficial results," however, and was not suggested to the public before Wolhaupter's invention thereof.

Whether he used a great or a small degree of inventive ingenuity is not important. Where there is any invention the court will not measure its extent or degree.

The law has no nice standard by which to gauge the degree of mental power or inventive genius required in bringing about a new device.

Said Judge Shipman:

> "A lucky, casual thought, involving a comparatively trifling change, often produces decided and useful results, and although it be the effort of a very small amount of inventive skill, the patent law extends to it the same protection as if it had been brought forth after a lifetime devoted to the profoundest thought and the most ingenious experiment to attain it."
>
> *Middletown* v. *Judd*, 3 Fish. 141.

The prior art admittedly *does not* anticipate nor limit this patent *beyond its own express terms.* The claims in issue are limited in scope *by their very terms,* but not by the prior art beyond the limitations thus expressed. We ask no expansion of these claims, but only that they be upheld to cover just what their terms call for.

(c) Patent No. 721,644.

It is submitted that the Sixth Circuit Court of Appeals erred in disregarding the distinction between Claims 7 and 9 of the third patent in suit and the other claims that are not in issue. It did not apply the rule laid down in the Talking Machine case, 213 U. S. 301; and other cases, *supra,* p. 15.

The court in the Elyria case also erred in its consideration of the prior patents and their supposed application to the invention covered by Claims 7 and 9. These claims are *limited to a specific combination,* one of the elements of which is a rail-abutting flange on the upper surfaces of the plate. Such construction is not shown in the Figures 2 and 8 used as illustrations in the opinion of the Sixth Circuit Court. That opinion, however, says:

> "The modified forms of the T-shaped plates appearing in the third patent on account of their general resemblance to the form above shown, need not be reproduced."

This may be true, but Fig. 6 of the drawings does not show the construction covered by the *claims in suit.* The court thus erroneously imported into Claims 7 and 9 as a limitation a T-shaped form having a long central lower rib. This element was intentionally and intelligently omitted both by the patentee and by the Patent Office officials from Claims 7 and 9, as immaterial and because these claims cover a proper patentable *combination of elements per se* without it.

The interpretation and construction which the patentee himself and those dealing with him thus placed upon Claims 7 and 9, should count for something. No basis for this ruling of the Court of Appeals is to be found in the prior art. To add to the claims that which they do not contain and which the inventor advisedly omitted, thus *changing* the patented *combination,* and then to anticipate this *court-made combination* by aggregating the prior art patents, is reversible error.

Again, the Sixth Circuit erred in picking out *one* element of the claims in issue—*i. e.,* the rail-abutting shoulder, and in considering invention as though the claim embraced that one element and *that only. Such is not the fact. This error of fact* was clearly pointed out by the Court of Appeals in the opinion in the Hart case. Each of the Claims, 7 and 9, is for a *combination,* clearly and specifically stated. The combination is novel —admittedly—and the only question is whether or not Wolhaupter exercised his inventive faculties or only his mechanical skill, in bringing into being for the first time in the art, the particular relationship of the two elements of the combination to produce the admittedly beneficial and patentable results.

We use the word "admittedly" advisedly, because the defendants' Tie Plate beyond all question contains the identical combination of the elements of Claims 7 and 9; and thus, by their zealous use, the defendants are estopped from denying utility. The combination was not obvious, it was useful, it was novel and we submit that the Claims 7 and 9 in issue are therefore patentable and valid.

The decree in the Sixth Circuit holding invalidity was erroneous and should be reversed, while the decree in the Seventh Circuit upholding the validity of these claims should be affirmed.

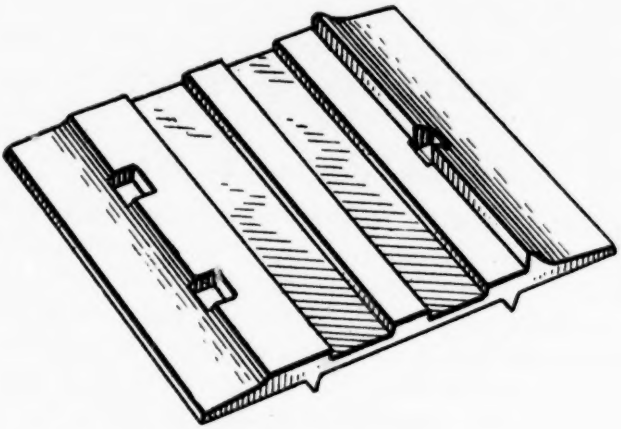
X.

INFRINGEMENT IS CERTAIN.

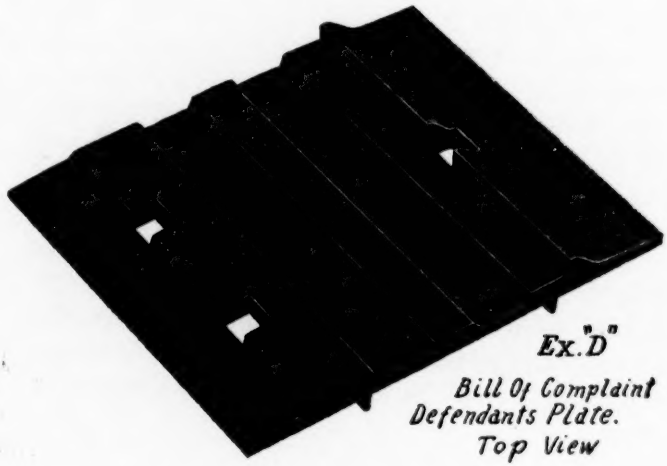
(a) The Defendant's Tie Plate.

Infringement of all of the claims sued upon is so manifest upon a mere reading of the claims, that discussion seems academic. The Sixth Circuit Court, in the Elyria case, and also Judge Kohlsaat in the Hart case, had to read elements and limitations into the several claims in order to hold non-infringement. Having pointed out in the preceding chapter the error in thus construing the claims, we proceed to consider the question of infringement.

The Tie Plate held in the Hart case to infringe the Wolhaupter patents, is marked "Complainant's Exhibit No. 15." It is illustrated in "Complainant's Exhibit No. 16, Photograph Defendants' Tie Plate" (R. Vol. 1, p. 22: Vol. II, Q. 71, p. 849), and is also shown in the right-hand figures of the defendants' blue-prints introduced in evidence as Complainant's Exhibits Nos. 19 and 20 (R. Vol. 1, p. 56). Placed side by side with the plate sold by the Supply Co. to the Santa Fe System (Compl. Ex. No. 14, R. Vol. 1, p. 41)—the court will be unable to distinguish between the two. This will be seen at a glance.



COMPLAINANT'S TIE PLATE.



(b) The First Wolhaupter Patent.

The only claim in issue of patent No. 538,809, is claim 8, which reads as follows:

> "Claim 8. A railway Tie Plate formed on the under side with devices more or less sharpened adapted to penetrate and engage the tie, and on its upper side with a series of flanges on which the rail rests, substantially as described."
>
> (First Wolhaupter Pat., R. Vol. 1, p. 14.)

It is plain that the Tie Plate in issue has on its under surface two parallel ribs extending entirely across the plate and located beneath that portion of the upper surface of the plate where the edges of the rail rest. As these ribs are approximately in the form of an equilateral triangle in cross section, their edges are substantially sharp. The structure, therefore, has that element of claim 8 which calls for "devices more or less sharpened adapted to penetrate and engage the tie."

CROSS SECTION FIRST WOLHAUPTER PAT-IN-SUIT #538,809-MAY-7-1895

It is manifest that the body, which is the thin portion, is provided with a series of transverse parallel flanges, three in number, extending above the thin body portion and upon which flanges or raised supports, the base of the rail necessarily rests. Thus, the Tie Plate has "on its opposite side" the other

element of claim 8, namely: "a series of flanges on which the rail rests" (McElroy, R. Vol. 1, p. 65).

It is suggested that Claim 8 should be so read as to include as a limitation the words "said flanges being formed by an arch," or words to this effect. There is no foundation for this suggestion nor do the necessities of the prior art require such limitation. The arched construction is covered by *other claims* of this patent, which are not involved in these suits.

The same may be said of the other suggestion that the *stepped* arrangement of the lower ribs, to provide adjustability, and which are specifically covered by claims other than Claim 8. Those claims are not here involved. Their very presence in the patent makes Claim 8 the more distinctive and its infringement the more certain.

If the upper series of flanges or rail supports and the lower sharpened tie-engaging devices constitute a new combination, which produced a new result, i. e., a better and more desirable plate, it is then a patentable combination. The Patent Office so held in granting Claim 8. The experts, McElroy and Miller, so testified. The railroad engineers so affirmed by their extensive use of it.

It matters not, therefore, whether the top flanges are the crowns of arches or are formed in some other manner; nor does it matter whether the under tie-engaging devices are long or short ribs or are the more or less sharpened ends of such arches. The *combination* is there just the same. Infringement is manifestly clear and certain.

(c) The Second Wolhaupter Patent.

The claims of the second patent in suit read as follows:

"1. A railway Tie Plate provided on its upper side with one or more flanges on which the rail may rest or by which it is directly sustained and on the under side with one or more tie engaging flanges extending *parallel* with the upper flanges and *directly beneath the latter*, substantially as described.

"2. A railway Tie Plate provided on its upper side with one or more flanges on which the rail may rest and by which it is directly sustained and on the under side with one or more tie-engaging flanges extending parallel with the upper flanges and directly beneath the latter and sharpened to permit them to readily *enter the tie*, substantially as described.

"3. A railway Tie Plate provided on its upper side with one or more flanges on which the rail may rest and by which it is directly sustained, on the under side with one or more *sharpened* tie-engaging flanges extending parallel with the upper flanges and directly beneath the latter, *and on* the upper side *with an additional flange or flanges extending above the plane of the rail*-sustaining flanges *and adapted to receive the lateral thrust of the rail, substantially as described.*"

It is perfectly clear from a mere inspection of the defendants' Tie Plate complained of, that it is provided on its upper side with one or more flanges on which the rail may rest and by which it is directly sustained, as called for by the first element recited in each of the claims. It is also clear that defendants' plate has on its under side one or more tie-engaging flanges extending parallel with and *directly*

beneath the upper flanges, as called for by each of the three claims. Having these two elements claim No. 1 is clearly infringed.

Further, inasmuch as the under flanges of the Tie Plates are "sharpened to permit them to readily enter the tie" as called for by the third element of Claim 2, that claim also is infringed.

In addition to the three elements specified in Claim 2, repeated as elements in Claim 3, the defendants' Tie Plate also has on its upper side an additional flange "extending above the plane of the rail sustaining flanges" forming a shoulder against which the edge of the rail rests, which shoulder is "adapted to receive the lateral thrust of the rail." Claim 3 is therefore infringed.

(d) The Third Wolhaupter Patent.

Claims 7 and 9 of the third patent in suit, No. 721,644, read as follows:

> "7. A Tie Plate provided in its rail-supporting surface with *transverse* grooves or channels, and at one margin of said supporting surface with a transverse rail-abutting shoulder."
>
> "9. A Tie Plate provided in its rail-supporting surface with *transverse* grooves or channels, *reaching to the edge of the plate,* and at one margin of said surface a transverse rail-abutting shoulder."

It is evident that the defendants' Tie Plate is one provided in its rail-supporting surface "with *transverse* grooves or channels" which extend from edge to edge of the plate and that "at one margin" of the rail-supporting surface there is a "*transverse*

rail-abutting shoulder," as called for by Claim 7. It is also evident that said grooves or channels reach "to the edge of the plate" or from margin to margin as called for by Claim 9. These features of construction are there for the same purpose and perform the same functions as they do in the patent in suit. Both experts found infringement and the Seventh Circuit Court of Appeals so held. (McElroy, R. Vol. 1, p. 66; Miller, R. Vol. 2, p. 644.)

Mr. Carter, the defendant's expert, has nowhere in his deposition denied or attempted to deny that the several features of construction, described separately as elements in the claims in issue, are found, per se, in the defendant's Tie Plate.

(e) Conjoint Use.

It is also certain that the three inventions of Wolhaupter are capable of conjoint, as well as separate, use, and are so conjointly used in the infringing plate. Major Miller so testified:

> "A. I am of the opinion that the structures called for by the several claims in issue of the Wolhaupter patents in suit are not only capable of conjoint use in one and the same Tie Plate, but I find them so used in defendants' Tie Plate marked 'Complainant's Exhibit No. 15, Defendants' Infringing Tie Plate.'"
>
> (Miller Rec., Vol. 2, p. 689.)

There is nothing in the specifications of either of the three Wolhaupter patents, nor in the prior art, as we shall presently discover, requiring a narrow interpretation of the claims in suit, nor should they be restricted to the specific form of device illustrated

in the patent drawings. Such a narrow interpretation should not be given for several reasons.

(a) Each Wolhaupter patent in suit contains *other* claims *than those in issue*, which other claims are directed, in terms, to the specific structure shown.

(b) The presence, therefore, of the claims in issue without such limiting terminology indicates an intention on the part of the patentee to secure, and of the Patent Office to grant, the claims in issue, as broad claims, *differentiated* from the specific constructions of the patent drawings and of the narrower claims not in issue.

(c) **"Each claim of a patent covers a complete invention, and is in substance an independent patent."**

Court of Appeals, Sixth Circuit (1910).
20th Century H. & V. Co. v. *Toplin Rice C. Co.*, 181 Fed. Rep. 96, and other cases, *supra*, p. 15.

(d) To limit the claims otherwise than by their terminology the court would not merely have to adopt a strict construction, but would have to *interpolate and read into* the claims elements not contained therein, such as the "arched" form, or as the Sixth Circuit Court did, erroneously, in the Elyria case read in the "stepped" arrangement covered by the other claims.

"We know of no principle of law which would authorize us to read into a claim an element which is not present, for the purpose of making out a case of novelty or of infringement."

McCarthy v. *Lehigh Val. Ry. Co.*, 160 U. S. 110, and other cases, *supra*, p. 14.

(e) An interpretation of the claims such as adopted by the court in the Elyria case holding non-infringement, will strike a death-blow to an industry built up upon this valuable contribution to railroad track construction. Such an interpretation by adding limitations to his invention as claimed, would deny to Wolhaupter the fruits of his labors. Infringement or non-infringement will not be the pivotal point in these cases, but, rather, the proper scope to be given to the invention.

The claims, being undoubtedly valid, this court will give them a fairly liberal interpretation,—will construe them according to their logical meaning and intent. It will not force upon these claims a strained and unnatural meaning or unnecessary limitations.

> (f) "That interpretation which *sustains* and *vitalizes* the grant should be preferred to that which strikes down and *paralyzes it.*"
>
> *National Hollow Brake Beam Co.* v. *Brake Beam Co.*, 106 Fed. Rep. 715 (C. C. A. 8th).

We make bold to assert that this court cannot reach a conclusion of validity without holding infringement. Similarly we insist that if these patents be not infringed, that conclusion will not be reached by limiting the scope of the claims and improperly (as the Sixth Circuit Court did), reading them upon the prior art. If the claims in issue are not infringed, it is because they are anticipated and invalid. *If they have any validity, they are infringed.*

The Seventh Circuit Court of Appeals had no difficulty in holding infringement. The appropriation of Wolhaupter's inventions being manifest, the decree in the Elyria case should, therefore, be reversed and that in the Hart case affirmed.

XI.

THE DEFENSE OF AGGREGATION.

(a) How Treated in the Courts Below.

In their briefs, our opponents urge the defense of aggregation and cite a long list of authorities upon the proposition of law that a mere combination of severally old parts producing no new or improved result or no better results, or an old result not obtained in a new and improved manner, is an unpatentable aggregation. They allege that in the Tie Plate held to have infringed the Wolhaupter patents, the several elements are old, *per se*, and that each "performs its old function in its old way and that the joint product is nothing more than an aggregate of the old results" (Main Bf., pp. 26-31; Suppl. Bf. pp. 30-34).

This defense was most strenuously urged in both the Elyria and the Hart cases, *as the main and the decisive point of defense*. The Sixth Circuit Court of Appeals, however, gave it absolutely no consideration in the Elyria case.

In the Hart case, both the District Court and the Court of Appeals carefully considered and then disposed of the defense of aggregation *as not having*

been sustained. In view of these facts, it is not surprising that the defense of aggregation is now merely raised as *one* point in the case. It is not the main reliance here, as it was in each court below.

(b) Unfair Presentation of This Defense.

Attention is called, however, to the unfair, though ingenious manner of presenting the defense of aggregation in the Supplemental Brief on page 31. There counsel do *not separately test the combination* of each of Wolhaupter's claims for alleged aggregation. Counsel, it is true, selects three elements found to be conjointly used in defendant's Tie Plate, and says of each that it performs its function in the plate "whether the other features are present or not." We submit that such statements, *per se,* are true of the elements of patentable combinations.

The test thus applied for aggregation is not sound nor logical. The three *inventions* of Wolhaupter—each being *per se* a *true combination* —are aggregated, that is are *conjointly* used in the infringing Tie Plate. This conjoint or aggregate *use* of three inventions, is an *entirely different and distinct thing,* as matter of fact as well as matter of law, from a mere conjoint use or aggregation of separate elements of one invention or combination. A and B may be a patentable combination; so also may be B and C, and A and D, but the *conjoint* use of these three inventions, A and B, B and C, and A and D, in *one structure* having as a result the combination of A and B, and C, and

D, would not necessarily involve a *fourth patentable combination.* Such a fourth *combination* might be void as an aggregation of the three inventions, but the combination, *per se,* of each of the three inventions thus conjointly used in one and the same structure, is not open to attack upon the ground of aggregation, if each is a true combination.

The claim of each Wolhaupter patent in issue is for a *combination,* the elements of which in each case do co-operate and do co-act to form a true, patentable combination. The result in each case is a new result and is not the aggregate of the results of the several elements. Each combination claim will stand the test applied in any one and in all of the cases on aggregation announced by this court. Each claim recites as an invention, a true patentable combination. It is only when the inventions of all three patents are combined in one structure, that any possible suggestion as to aggregation may be even *argumentatively* advanced.

The defense of aggregation is applicable only to the *claim* of a patent, and is not applicable to a *structure* which may embody or conjointly use several *inventions.* In the one case, aggregation applies as a non-patentable condition surrounding the grouping of the separate elements of a claim. In the other case, aggregation may properly apply to the mere *addition* of three independent inventions conjointly used in a given structure without in the slightest measure affecting the validity of either invention as a patentable combination.

Counsel points out (Suppl. Bf. p. 30) the rail-abutting shoulder of Wolhaupter's third patent and

the tie engaging bottom ribs of the first patent, and then argues aggregation based upon the fact that each element "performs its own function independently" and "whether the other features are present or not." It is very significant that the astute counsel did not consider the *combination* of the two elements of Claim 8 of the first patent—the series of raised flanges combined with the more or less sharpened bottom ribs.

It is significant that he made no attempt to apply the test of the rule of aggregation to Claims 1, 2 and 3 of Wolhaupter's second patent, each of which embraces as part of the combination the requirement that the under ribs shall be "directly beneath" the upper flanges—thus demonstrating co-action and true combination and negativing aggregation. And again, it is significant that counsel did not test for aggregation the combination of the elements of Claims 7 and 9 of Wolhaupter's third patent, each of which the co-acting and co-operative location of a rail-abutting shoulder "at one margin" of the grooves or channels, *i. e.*, adjacent to the latter, so that the sand and grit may fall or be swept into the channels and not remain to grind away the plate at the point where the rail-abutting shoulder is located.

No! Instead of this, counsel attempts to confuse the application of the rule of aggregation by an argument to show that *defendant's plate is unpatentable* because of aggregation, and therefore, counsel concludes, it does not infringe Wolhaupter's valid patents! He says:

> "The defendant's Tie Plate is an unpatentable aggregation of old features, and, *therefore,* cannot be covered by the Wolhaupter patents" (Suppl. Bf. p. 30).

This is repeated in various forms throughout the brief, particularly on pages 31 and 34. **The answer is that Wolhaupter does not have ONE patent covering the WHOLE of defendant's Tie Plate.**

Wolhaupter has *three valid patents,* each covering a part of the defendant's Tie Plate. Each patent is infringed by said plate. The three patented inventions are conjointly used in the infringing plate. The argument that no patent has or could be granted upon the plate structure as a *whole,* and that its several elements or features are *per se* old in the art, or that some of its features do not coact with all of the other features, does not make for aggregation, nor for non-infringement.

The patent and the applied art in railway Tie Plates are comparatively young and cover a period of not more than fifty years. The history of Tie Plate construction is not fully revealed by the various Letters-Patent issued, supplemented by articles printed in various trade journals. The real history and the evolution of track construction is revealed more fully by the appearance of Tie Plates on the market and their actual use in track. Tested by the rule of "survival of the fittest," one learns the true tale of value, utility and success. Tested by this measure, the Wolhaupter Tie Plate stands out as the embodiment of inventive genius of *great practical merit,* of undoubted commercial success and of great utility.

XII.

UNSUBSTANTIATED ASSERTIONS IN BOTH MAIN AND SUPPLEMENTAL BRIEFS FILED BY COUNSEL FOR DEFENDANTS.

(a) Commercial Forms.

In the main brief, counsel state:

> "It is not asserted that complainant ever manufactured any Wolhaupter Tie Plates of the forms shown and described in the Wolhaupter Letters-Patent. The aluminum models of defendants were the first specimens of the various forms of Wolhaupter patented Tie Plates that were ever made. Positive evidence also supports this conclusion. E. O. Faulkner, the Santa Fe expert, who made an elaborate investigation of the plates in 1904, *never saw* a Tie Plate in actual use like the Exhibit O, or the drawing of the first Wolhaupter patent." (Reed Brief, p. 73.)

Substantially this statement is made in other places of this brief. In the supplemental brief, counsel state that the

> "Wolhaupter patents do not show or describe Tie Plates of commercial value. In fact, no Tie Plates as shown and described in those patents were ever put into commercial use. The patents are mere paper patents." (Fish Brief, p. 2.)

Again:

> "The record shows that there never has been a Tie Plate put into commercial use made in accordance with the description and drawings

of any one of the Wolhaupter patents." (Fish Suppl. Bf., p. 69.)

These statements, even if true (which we deny), can avail the defendants nothing. For even if the precise, accurate, "Chinese" copy, form or design of the patent drawing had never been manufactured or used commercially, such fact would not deprive the patent owner of the right to prohibit others from using the invention in that same form or in any equivalent form. This court has decided that even where the device of the patent had never been manufactured and put upon the market commercially in any form except by the infringing defendant, the patent was good and its infringement would be enjoined.

Continental Paper Bag Co. v. *Eastern Paper Bag Co.*, 210 U. S. 438.

There is no foundation as matter of fact for either of these statements by our opponents. The *record, on the contrary, shows* that the Tie Plates sold by the Supply Co. as Wolhaupter Tie Plates, did embody and contain the invention of the several Wolhaupter patents here in suit.

For example, the first Wolhauper patent, No. 538,809, in Fig. 2 of the drawing, illustrates in a cross-sectional view, taken through it where the rail rests upon the plate, a Tie Plate like this form:

CROSS SECTION FIRST
WOLHAUPTER PAT-IN-SUIT
#538,809-MAY-7-1895

Contrast with this design or section the accompanying illustration which is a similar cross-sectional view of the commercial form of this patent, as first placed on the market.

CROSS SECTION COMMERCIAL FORM FIRST WOLHAUPTER PATENTED TIE PLATE

No one looking at these two illustrations would pretend to say that they were substantially unlike. Anyone looking at them critically, would, of course, notice some very slight variations in outline. For example, the under devices, more or less sharpened, are slightly longer in the commercial form than in the patent form, as illustrated, and these devices are, in the commercial form, separated by more flat-like domes than in the patent form. In other words in the patent form, the arch and girder arrangement catches the eye a little more quickly because in the commercial form the curve of the arch is more flattened.

These illustrations each cover a style or design of Tie Plates having in combination, in accordance with the terms of Claim 8, of the first Wolhaupter patent: on its under side "devices more or less sharpened adapted to penetrate and engage the tie," and having on the upper surface, a "series of flanges on which the rail rests."

The latter illustration gives us the form of the plate which the Supply Co. sold up to 1904 to the

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Santa Fe Railroad, exclusive of other types of plates. It was not only *a* standard on the Santa Fe, but was *the* standard, up to that period. Those plates, it is true, were more or less light in weight as compared with the present size and weight of plates, but they lasted more than their expected life and many of them were still in service in track at the time the evidence in these cases was being taken (see Thompson Dep. Vol. 2, p. 592, *et seq.*).

This commercial form shows the corrugated top Tie Plate, which is the characteristic feature of the Wolhaupter invention. This same form of Tie Plate is being manufactured and sold today. Variations thereof, absolutely permissible under the well established law of equivalency, have been made from time to time, as for example, in the Tie Plates illustrated in the Railroad Supply Company yellow and green catalogues, in evidence as Exhibits 21 and 22 (Vol. 2, p. 901, 924), and as shown in the Harriman Plate, Exhibit 12 (Vol. 1, p. 41).

(b) Utility Assailed.

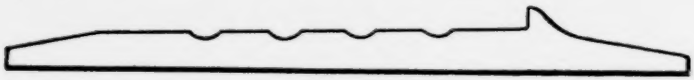
As in the court below, counsel has here assailed the proofs introduced to show the use in track of enormous ~~qualities~~ of Wolhaupter Tie Plates, saying in the brief filed:

> "But it is not true that the Wolhaupter Tie Plate, even in the forms manufactured, met with universal recognition and adoption. It was condemned by many railroads and many absolutely refused to put it in track." (Reed, Main Bf. p. 75.)

Counsel then attempts to show that t he Wolhaupter Plates were condemned by the Santa Fe System in 1894. This is evidently an error in date—counsel no doubt intended to say 1904. This effort is futile in face of the admitted fact that the first commercial form of the Wolhaupter Plate was

CROSS SECTION COMMERCIAL FORM FIRST WOLHAUPTER PATENTED TIE PLATE

"standard" on the Santa Fe up to 1904, and large quantities used, in the face of the undisputed fact that the Wolhaupter Plate, like Ex. No. 13, (Vol. 1 opp. p. 42), and like Ex. J,



SANTA FE STANDARD JUNE 28-1904 TO 1908

DEFENDANTS' EXHIBIT J

was "standard" on the Santa Fe from 1904 to 1908, and large quantities sold to and used by it in track (Bell, R. Vol. I, p. 90 and Hawley, Vol. I, p. 46), and in the face of the *admitted* purchase by the Santa Fe from the Railroad Supply Co. and use in its tracks, *pendente lite*, of 168,308,718 pounds of the ~~infringing~~ Wolhaupter Tie Plates, Vol. II, p. 865).

However, we insist, that there **is no proof in the record showing, or even tending to show, that any railway "DISCARDED" the Wolhaupter Plates.**

Upon the contrary, the record does show that, *of the four largest railway systems in the country,* the Pennsylvania, the Harriman Lines, the Santa Fe System, and the New York Central System, *the three last mentioned, use the Wolhaupter Plate by* the millions, and that the Pennsylvania uses a Tie Plate patented to its chief engineer, Mr. Richards.

The *uncontradicted* evidence of Mr. Hawley (R. Vol. 1, p. 43) and of Mr. Bell (Exh. 58, R. Vol. 1, p. 89) is to the effect that *practically every* one of the 1,300 railroads in this country is using the Wolhaupter Tie Plate, and that, of all the Tie Plates sold by all the various manufacturers, the statistics show that more than 52 per cent are Wolhaupter Tie Plates. (Bell, Q. 25, Rec. Vol. I, p. 87 ; Hawley, Vol. I, p. 43.)

There is some proof tending to show that earlier type or pattern of Wolhaupter Tie Plates were unsatisfactory, and also that a number of trunkline railroads have adopted and are using a Tie Plate of different design from that of Wolhaupter. Some manufacturers of Tie Plates are selling their distinctive design or pattern of Tie Plate to various railroads. This, however, does not disprove the value or utility of the Wolhaupter Tie Plate. It only shows a normal condition of the trade and that the Railroad Supply Co. does not enjoy a complete monopoly. We never asserted that the Wolhaupter patented plates have superseded all other forms of Tie Plates; but we insist that a showing of 52 per cent of all Tie Plates in

use being of the Wolhaupter type and invention, mades a wonderfully strong plea for the utility and patentability of the Wolhaupter Plate.

In reply, to the attacks of our opponents, we adduced proofs to illustrate the way the *original, early types* of Wolhaupter Plates held up in service. The proof shows (by deposition of Mr. Thompson and others) that the said plates are *still being used* in track on the McCook curve on the Santa Fe Road (R. Vol. 2, p. 594); on the Chicago Terminal Transfer Railway (R. Vol. 2, p. 607); on the Chicago Terminal Transfer near Harvey (R. Vol. 2, p. 608); and on the Northwestern at Janesville and near Aurora (R. Vol. 2, p. 587).

The proofs also contain the statements of Mr. Bell and Mr. Ebert with respect to the use of the Wolhaupter Tie Plates as standard on the New York Central R. R. (Bell Dep., R. Vol. 1, p. 93; Eber, R. Vol. 2, p. 630); and of Mr. Buck that the Wolhaupter top groove Tie Plates sold by him are in use upon many other important lines in the East, such as the Boston & Albany; the New York, New Haven & Hartford; the Lehigh Valley; the Lackawanna, Seaboard Air Line and others.

Counsel for defendants particularizes. For example, he states that the Illinois Central "after some experience with the Wolhaupter plate, discarded it," because the assistant engineer Steinbeck considered it destructive to ties (Reed Main Bf., p. 75); that the standard on the Chicago, Rock Island and Pacific Railway System "was a flat bottom plate and not the Wolhaupter" (Reed Bf. p. 76); that the Chicago

and Rock Island Road, after using a few Wolhaupter plates, abandoned them because the flanges were too thick and caused the ties to rot" (Reed Bf. p. 76); that after a test use, in 1906, of the Wolhaupter plates on the Monon road, those plates were abandoned and taken out of track "because the Wolhaupter plates were not satisfactory" (Reed Main Bf. p. 77).

These statements are made *dehors* the record. It is not expected that this court will accept them.

Instead of the Illinois Central discarding the Wolhaupter plate, *that railroad purchased*, between 1899 and 1909, inc., 1,019,951 Wolhaupter Tie Plates, like Exhibit No. 24, and in September, 1910, it purchased 300,000 Wolhaupter plates like Complainant's Exhibit No. 12 (Stipulation, Vol. 2, p. 873-4; Exhibit 24, Vol. 1, p. 83; Exhibit 12, Vol. 1, p. 41).

As to the Rock Island Railroad, the witness Cogswell testified to a physical inspection of the track of that road and took photographs of Wolhaupter Tie Plates actually in use in the road bed (Vol. 2, p. 617, Q. 26, *et seq.*). Also see photograph Exhibits 129, 130 and 131 (paged as 939, 41, 43, opposite p. 616, in Vol. 2).

With respect to the Chicago & Alton road, *instead of being abandoned, the evidence shows that the Wolhaupter* Tie Plates have been *continuously purchased* from 1899 to 1907, and that in that period, 121,671 Tie Plates like Exhibit 24 (R. Vol. 1, p. 83) and 229,438 Tie Plates, like Exhibit 12 (R. Vol. 1, p. 41), or a total of 351,009 corrugated type Wolhaupter Tie Plates, have been

purchased and are in use on that railroad (Stipulation, Vol. 2, p. 783).

As to the Monon road, from 1899 to 1907 —304,150 Wolhaupter Tie Plates like Exhibit 24 have been purchased and are in use in track (Stipulation, Vol. 2, p. 873).

The witness Commerford inspected the Chicago & Northwestern tracks, and made photographs of Wolhaupter corrugated type Tie Plates which he found in use in track near Aurora, Illinois (Exhibit 71), near Huntley, Illinois (Exhibit 76), Janesville, Wisconsin (Exhibit 86); (R. Vol. 2, p. 584, *et seq.*)

The witness Thompson produced photographs of Wolhaupter plates in use in track on the Santa Fe, near McCook, Illinois, and Corwith, Illinois; the same being Exhibits 95 to 105, inc. (R. Vol. 2, p. 592).

The witness Layfield identified exhibit photographs Nos. 106 to 109, showing Wolhaupter Tie Plates in use on the Chicago Terminal near ~~Harvard~~ Harvey, Illinois (Vol. 2, p. 606, *et seq.*)

H. M. Buck testified to a long list of railroads to whom he has sold Wolhaupter Tie Plates (Q. 6, Vol. 2, p. 621); including the Baltimore & Ohio, Lehigh Valley, Seaboard Air Line, New York Central Lines; all referred to in the main brief (Reed) pages 75 to 78, inc., and other roads.

In the main brief, it is stated with respect to the Baltimore & Ohio, that the "Wolhaupter plate was used only to a small extent" (R. Vol. 1, p. 77). Mr. Buck testified that in December, 1908, he sold to the Baltimore & Ohio road, 1,030,000 Wolhaupter Tie Plates. (Q. 7, Vol. 2, p. 621.) A "small extent"!

In the main brief, on page 77, counsel give the names of four manufacturing concerns, which produce from ten to twenty thousand tons of Tie Plates each year, and states that they are supplying such Tie Plates to ten different roads, mentioned; one of said roads being the New York Central Lines. Assuming that these four concerns are manufacturing the maximum of 20,000 tons per year—that would be a total of 80,000 tons. As against this, Mr. Buck testified in May, 1910, that his sales of Wolhaupter Tie Plates to the New York Central Railroad "during the past three years" will amount to something over 3,000,000 plates.

Moreover, in the main brief (p. 76), counsel make it appear from the deposition of Mr. McCarthey, that the standard on the Chicago Rock Island & Pacific Railway System "is a flat bottom plate and not the Wolhaupter." The deposition of Mr. McCarthey is on page 498, Vol. 1, and *does not bear out the statement of defendant's counsel.* In Q. 8 he points out that the present standard for all sections of rail except 100 pound rails for the Rock Island is shown in the drawing marked Exhibit RR; and in Q. 11, states that the standard was adopted September 7, 1906. In Q. 14, he states that the Rock Island has purchased Tie Plates from the Railroad Supply Company.

In the deposition of John W. Ebert, superintendent of the New York Central Railroad, and connected with it for twenty years, it is shown that the Wolhaupter type of Tie Plate is "very extensively" used on the New York Central, as well as on the

West Shore Railroad, and that they are "very efficient and satisfactory." (Vol. 2, p. 630-1, Q. 7.)

The fact of the matter is that there is no testimony in the record showing that Wolhaupter Tie Plates, *once purchased by any one railroad,* **have ever been "ABANDONED" or have ever been "DISCARDED" or have ever been "TAKEN OUT OF TRACK" and other forms of Tie Plate substituted, except when absolutely worn out at the end of their normal life.**

It is, of course, true that many large purchasers and users of Wolhaupter Tie Plates have also used other types of Tie Plates. The Supply Co. does not pretend to have monopolized the Tie Plate business of the United States, nor of any single railroad. At most the evidence shows that of the total business of the Railroad Supply Co., in Tie Plates, 77 per cent thereof has been of the Wolhaupter corrugated top type; that this 77 per cent of the Supply Company business in Wolhaupter patented Tie Plates constitutes at best only about 52 per cent of the entire Tie Plate business of the country (Hawley Dep. Vol. 1, p. 43; Bell, Vol. 1, p. 87). It detracts nothing from the value and utility of the patented structure for our adversaries to point out, as they have most unfairly done, that some roads are using, also as standard Tie Plates, a form of plate other than that of the Wolhaupter plate.

(c) Allegation That Only a "Comparatively Small number" of Wolhaupter Plates Were Made and Those "About Twelve Years Ago."

Another erroneous and misleading statement appears in small type beneath the illustration of Wolhaupter Tie Plates (Exhibit 24) appearing on pages 7 and 70, of the supplemental brief.

> "A comparatively small number made about twelve years ago." (Supp. Bf. p. 7 and 70.)

This is a grossly inaccurate, unauthorized and misleading statement: the more harmful because, being in juxtaposition to an illustration, it catches the eye quickly.

In the text also, of the supplemental brief, the same statement is repeated. For example:

> "Plaintiff does not now make and has not made for the past twelve years, any Tie Plates in the least resembling that shown and described in the first Wolhaupter patent in suit. More than twelve years ago it made a comparatively small number of Tie Plates, which are alleged to have had some but not all of the features of that patent." (Supp. Bf. p. 6.)

The *only* reference to testimony cited by our adversaries to substantiate these statements, is contained in the supplemental brief, on page 6, to wit: the deposition of Mr. Bell (R. Vol. 1, p. 29). A careful perusal of Mr. Bell's deposition on cross-examination, on page 29, *does not support* the contention thus improperly made by defendant's counsel.

Mr. Bell testified, in X-Q. 112, that the Supply Company **was making** *the form* of Plates styled "Wolhaupter" of the "general type as shown in

Exhibit 21, p. 3," when he (Bell) first became associated with that company in *the year* 1898 (R. Vol. 1, p. 126). Exhibit 21 is the yellow catalogue found in Vol. 2, beginning on page 901, and the type of Wolhaupter plate referred to is shown on page 905. This is the same plate as Exhibit 24, shown in the supplemental brief on page 7. In X-Q. 129, Mr. Bell was asked how long the Supply Company continued to manufacture Wolhaupter plates as shown in Exhibit 21, p. 3, and he answered:

> "The type of Wolhaupter Plate shown in Exhibit 21, page 3, to the best of my knowledge, **was made first in 1895, and is still being made.** There have been modifications of the Plate made since its original manufacture, but the general type is the same." (Vol. 1, p. 127.)
>
> "X-Q. 144. How long, or until what time, rather, did the Railroad Supply Company continue to confine its manufacture to Tie Plates of the Wolhaupter, Q. & W. and Servis styles, as indicated in the various pages of Exhibit 21, that you have designated, including the Plate with the pressed up shoulder?
>
> A. The Railroad Supply Company **are manufacturing them to date.**" (R. Vol 1, p. 129.)

Again, the same is true of Exhibit 22, complainant's green covered catalogue (R. Vol. 2, pp. 901, 924). Both catalogues illustrate various forms of Wolhaupter corrugated type Tie Plates that were being manufactured and sold to and used by railroads at the time the bill was filed and at the time the testimony was taken. It is true that some of those particular forms were not manufactured as early as some of the other forms. That fact, however, by no means justifies the asser-

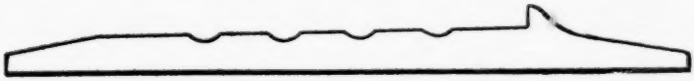
tion that the earlier forms were discontinued when the modifications or later forms were introduced.

Moreover, the statement that *"a comparatively small number made twelve years ago"* is highly misleading. This whole line of argument shows the straits to which defendants' counsel have been put in their attempt to discredit this epoch-making invention. Further comment seems unnecessary.

(d) The Unsubstantial Claim That the Design of the Infringing Tie Plate was Originated by W. F. Storey of the Santa Fe System.

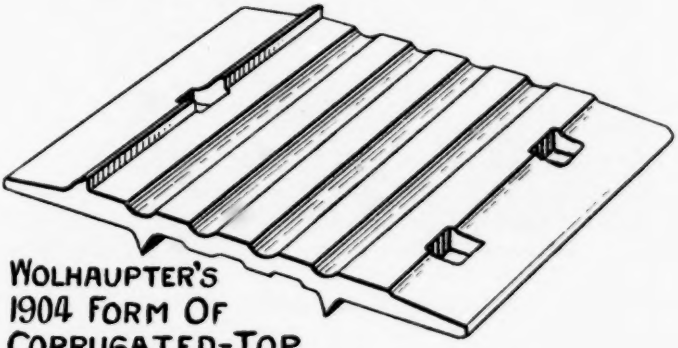
The claim is made in the defendants' briefs (it was in their briefs and at the various hearings below) that the Tie Plate in issue held to infringe in the Seventh Circuit case, not only does not infringe the Wolhaupter patents, but *that its specific form* was originated and designed by Mr. W. F. Storey, chief engineer of the Santa Fe System. We have considered the question of infringement elsewhere in this brief. Here we reply to this false claim of originality. Mr. Storey never applied for a patent on his alleged Tie Plate nor has any patent right to that particular form of Plate been advanced by any one other than the Railroad Supply Company.

The facts, briefly stated, are these: From 1904 to 1908, the Railroad Supply Company made and sold to the Santa Fe System as the "standard" of that railroad, many thousands of tons of Tie Plates, like Exhibit J.



SANTA FE STANDARD
JUNE 28-1904 TO 1908
DEFENDANTS' EXHIBIT J

In May of 1904 Wolhaupter designed a modification of this Plate. (Hawley, R. Vol. . ., p. . .; Bell, R. Vol. 1, p. 91; Wolhaupter, R. Vol. 1, p. 170.)



WOLHAUPTER'S
1904 FORM OF
CORRUGATED-TOP
TIE PLATE EX. Nº 18.

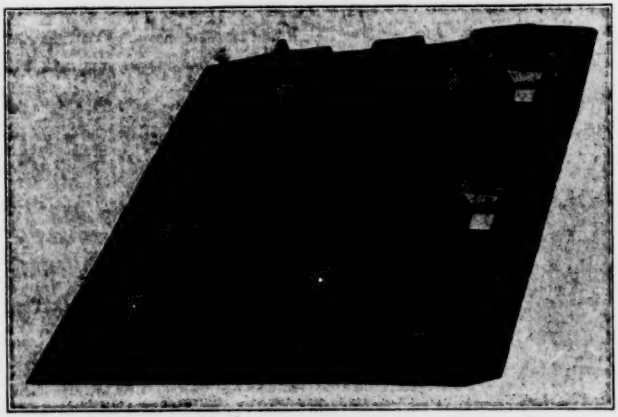
WOLHAUPTER, MAY, 1904, TIE PLATE, EXHIBIT No. 18.

> "I personally designed this Plate, made the drawings of it, had the model made and some aluminum castings made from the model of full size very early in May, 1904." (Wolhaupter, R. Vol. 1, p. 170.)

One of these Plates was delivered to the Santa Fe Railroad and was available for the inspection of Mr.

Storey, when, later on, as the new chief engineer of that road, he began to study the question of Tie Plates. (Hawley, R. Vol. 1, p. 55; Bell, R. Vol. 1, p. 91; Wolhaupter, R. Vol. 1, p. 170.)

In April, 1905, blue-prints were prepared for the Southern Pacific Company of the "Harriman" Plate.



HARRIMAN PLATE, COMPLAINANT'S EXHIBIT No. 12.

With respect to the arrangement of the grooves and other features, the Tie Plate, Ex. No. 18, produced by Mr. Wolhaupter in May, 1904, is essentially like the general design of the Harriman Plate produced a few months later. It differed only in non-essential details; also had all of the features of the so-called "Storey" plate. It had a shoulder and a series of rail-supporting spaced flanges on its top surface forming grooves between the flanges adjacent to this shoulder, and it had tie-engaging ribs on its bottom surface, all running lengthwise of the rail and cross-

wise of ~~tire~~ tie. The Railroad Supply Company manufactured two Tie Plates. (R. Vol. 1, p. 41.) These were identical with those which it had theretofore been making and selling to the Harriman and called "Harriman Plate," *with the addition* of two under ribs.

These two plates like Exhibit No. 14 *were delivered* to the Santa Fe System *in May*, 1908. So that the proofs clearly show that the Wolhaupter, 1904, Tie Plate *preceded and was the prototype of both* the Harriman and the so-called "Storey" Plates.

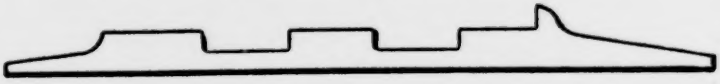
It is beyond dispute, as the evidence clearly shows, that Mr. Storey *began* his study of Tie Plates after Plates like Exhibits 18 and the Harriman Plate (Exhibit 12) had not only been made but after *samples* had been submitted to his road. He says himself it was "somewhere between 1906 and early in 1908" (R. Vol. 1, p. 313) that he began his study of the Tie Plate situation. He studied the entire problem, he says, made many drawings and sketches of forms of Tie Plates and consulted many people.

> "I simply talked with all men that I could find that were conversant with Tie Plates, that were interested in Tie Plates, and in some cases with men engaged in rolling Tie Plates." (Q. 48, 53, R. Vol. 1, p. 314-5.)

He talked with Mr. Bell, the vice-president of the Railroad Supply Company, who showed him the Harriman Plate. (Q. 55, R. Vol. 1, p. 315.) The development of the Plate, now improperly attributed to him, Mr. Storey admitted covered a long period of time. He testified:

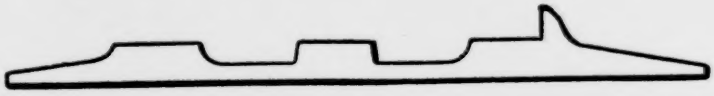
> "I think the greater part of *a year and a half* taking it up at different times and under differ-

ent circumstances, and waiting from time to time until I could have conference with different people." (X-Q. 125, R. Vol. 1, p. 323.)



STOREY BLUE PRINT
MARCH 1908
DEFENDANTS' EXHIBIT P1.

When he talked with Mr. Bell, in May, 1908, all he had accomplished was a modification of the Harriman Plate—a flat bottom Tie Plate. These were followed by other designs, blue-prints of which are in evidence.



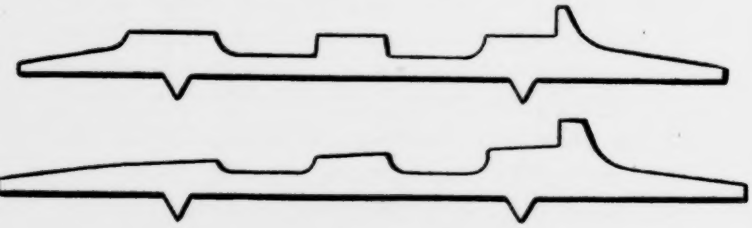
STOREY BLUE PRINT
APRIL 3-1908
DEFENDANTS' EXHIBIT P3

Blue-print, Exhibit P-3, illustrates the result of Mr. Storey's efforts *as late as April, 1908, the date found on said blue-print.* It shows a flat bottom Plate with corrugated top and the rail sustaining shoulder on top differing from the Harriman Plate very slightly and only in details. But let us refer to what Mr. Storey himself says:

"I had practically completed the design, about the *middle of* 1908. At that time Mr. Faulkner

returned home from a trip he had been making in the interest of the company, and I showed him what I had in mind, which did *not include ribs* on the bottom of the Plate. Mr. Faulkner *suggested* that he believed ribs at right angles to the tie would be a distinct advantage, and then I went into a very careful investigation of the subject from that point of view, and added these ribs at his suggestion and after reaching the conclusion myself that they were necessary and would better the Plate." (Storey Q. 62, R. Vol. 1, p. 316.)

Then in June, 1908, Mr. Storey prepared a blueprint, Exhibit P-6, having a top surface substantially like the Harriman Plate, but with two under ribs, *as suggested by Mr. Faulkner.*



STOREY BLUE PRINT
JUNE 1908
DEFENDANTS' EXHIBIT P6

Mr. Storey admitted, however, that he requested the purchasing department of the Santa Fe Road to purchase plates of this design having under ribs so that they might be tested and that some were so purchased from the Railroad Supply Company which were made in a machine—not rolled, and he used them for making tests.

> "I am not sure as to whether the result of those tests caused me to make any changes in the details of the dimensions or not." (R. Vol. 1, p. 317.)

These were the two plates, Exhibits No. 14, *supra, testified to by Mr. Hawley and Mr. Bell* (R. Vol. 1, pp. 41 and 90), *delivered to him in May,* 1908.

Thus up to the spring of 1908, Mr. Storey after spending a year and a half in the designing of a Tie Plate, had not yet determined upon anything, so far as the top of the plate was concerned, that differed from the form and arrangement of the Wolhaupter 1904 Plate or from the Harriman 1905 Plate.

Mr. Storey testified that the *final result* of his efforts was embodied in the blue-print, Defendants' Exhibit Q, dated *September,* 1908, and reproduced as Complainant's Exhibit No. 19. (R. Vol. 1, p. 57.) *It was from this September,* 1908, *blue-print,* Ex. Q., that the 5,000 tons of infringing Tie Plates were fabricated. Mr. Storey distinctly disclaimed any originality or invention in this selected form of plate (X-Q. 148, *et seq.* R. Vol. 1, p. 325).

The design of his so-called Storey Plate is *identical* with that of the plate, Ex. No. 14, made by the Railroad Supply Co. under the Wolhaupter patents in suit and *delivered in May,* 1908, *by its vice-president, Mr. Bell,* to the Santa Fe System. Moreover, the so-called Storey Plate is substantially like Ex. 18, made by Wolhaupter in May, 1904, and similarly submitted to the Santa Fe System.

There cannot be even the shadow of a doubt that the form and substance of the

infringing plate was first produced by Wolhaupter in 1904, or that its *precise* design was first produced by the owners of the Wolhaupter patents, *disclosed* to Mr. Storey and two of such plates actually delivered by Mr. Bell in May, 1908, months before the Storey blue-prints of Sept. 8, 1908, were completed and adopted.

These facts, *undisputed*, entirely rebut our opponent's assertions that Mr. Storey designed and originated the infringing Tie Plate.

XIII.

DEFENDANT'S MOTION TO DISMISS IN HART CASE.

(a) The Decree in the Sixth Circuit Not Final.

Our opponents have assigned as error in the Hart case, the refusal of the Seventh Circuit Court of Appeals "to hold the prior final decisions of the Sixth Circuit binding and final as *res adjudicata*," to the Seventh Circuit case. (R. Vol. 3, p. 1429; Reed Bf., p. 7.)

The grounds stated in the main brief, pp. 8-17, although varying in recital, are identical in substance, i. e., that the parties to the Elyria suit in the Sixth Circuit, and the Hart suit in the Seventh Circuit, are in *privity*, and that a *final* decree was rendered in the Sixth Circuit Court of Appeals from which no appeal had, at the time of making the motion in the Seventh Circuit, been taken to the Supreme Court. The Elyria case, however, *is now*

before this court upon writ of certiorari. (No. 95, Oct. 1916 Term) *for decision by this court upon its merits. This very fact demonstrates that the decrees in the Sixth Circuit were not final.*

The primary issues to be decided by this Supreme Court, are whether or not the three Wolhalpter patents are valid, and infringed. If the judgment of this court be, as we believe it will be, that Wolhaupter's patents are valid and infringed, then it will be *a moot question* whether or not the Seventh Circuit Court of Appeals erred in deciding on the merits of the case before it, and quite immaterial now whether that court denied the motion to affirm on the ground of *res adjudicata* or upon any other ground.

In the main brief filed, counsel admit that this court has ample jurisdiction to review the entire Elyria case on the merits.

> "(6) Although, of course, by the granting of writs of certiorari, and the consolidation of the two cases, this court has full jurisdiction to adjust the entire situation between all the parties," etc. (Reed, Main Bf., p. 17.)

Our adversary thus abandons his whole point, to which Chapter 3 is directed.

Even upon the assumption (which we do not admit to be at all tenable), that the decree in the Elyria case was final and was binding as *res adjudicata,* this court now having both cases before it, will not dispose of them upon purely technical grounds, but will decide on the merits. Moreover, even if inclined to rule upon the technicality raised in the Hart case, this court must nevertheless now pass upon the *merits* in

the Sixth Circuit case, and must affirm the Ohio decree *before the technicality raised* in the Illinois case *could possibly apply,* since the Ohio case is now in this court for a review of that decree.

We are convinced that this Supreme Court will not open the back door of technicality to allow a guilty infringer to escape. The time has long since passed when the rights of parties, the justice of a cause and the substance of valuable inventions shall be sacrificed to the science of artificialities and technicalities. Having these two cases before it, we entertain no doubt whatsoever that this court will dispose of them upon their merits and meet out long delayed justice to a meritorious inventor.

(b) There Was No Privity on Which to Base Res Adjudicata.

However, we assert with confidence that on the record presented, no question of *res adjudicata* can properly arise. The proponent of this proposition bases it upon the claim of privity of parties, but the record does not bear out his contentions. We call attention to the following facts which appear from the record, at the places cited in the defendant's brief:

First: The Hart Steel Company and the Elyria Iron and Steel Company are *entirely separate and distinct* corporations, organized under the laws of and citizens of the States of Illinois and Ohio, respectively.

Second. The suit in the Sixth Circuit was against the Elyria Company, a *manufacturing* corporation,

while that in the Seventh Circuit was against the Hart Steel Company, a *mercantile* corporation.

Third. There is no pretense and no proof that the Hart Steel Company or that Guilford S. Wood *participated financially or otherwise,* in the defense of the Elyria suit in Ohio, or directed and controlled such defense.

Fourth. There is no proof cited and there is not a particle of evidence in the record in either of the two suits, to show that either the Hart Company or Wood, in the Illinois suit, had agreed to be bound or would have been bound by the decree in the Ohio suit, had that suit been decided in favor of the Railroad Supply Company.

Fifth. The decree in the Ohio case protects the parties thereto and their privies, until reversed by this court upon certiorari, but we submit that privies as defined in the authoritative decisions, mean those who participate in, control and direct the defense of that suit, openly and notoriously, and to such an extent that they would have been bound by the decree had the decree been against them. The record does not show any evidence that measures up to the requirements of this definition.

Several other matters are suggested in the brief, but when analyzed, they will be found insufficient to constitute any estoppel, and they are therefore immaterial. Some of these facts are as follows:

(a) That the two suits are based upon the same patents.

(b) That the same structure is alleged to infringe in each case.

(c) That the infringing Tie Plates were of the same lot, were made by the Elyria Company and were sold by the Hart Company and Wood, and that therefore the issues are the same.

(d) That the Hart Company is the selling agent of the Elyria Company.

(e) That the Elyria Company owns all the stock of the Hart Company.

(f) And that one W. S. Willer is president of both the Elyria and Hart companies.

Not one of these grounds, separately, nor all of them taken together, are material, even if true as statements of fact.

Another reason suggested why the Seventh Circuit Court should have held the decree of the Sixth Circuit Court final as *res adjudicata*, is based upon the statement that:

> "The Atcheson, Topeka & Santa Fe Railway Company, though not a party to either suit, has had practical control and charge of the suits, and employed and paid counsel for all defendants,"

and further, that it had

> "guaranteed both companies against loss by reason of patent infringement."
>
> (Reed, Main Bf., p. 9.)

The fact that the two suits were based on the same patents and directed against the same structures, and these structures were made by the Elyria Company and sold by the Hart Company, clearly creates no privity whatever, and *per se*, can afford no basis for the application of the doctrine of estoppel. Situations like these arise every day. Had the decision

of the Sixth Circuit been against the Elyria Company, one can well imagine with what emphasis the learned counsel who now asserts estoppel would point out, as he could point out successfully, that the essential elements of estoppel were absolutely lacking, and that identity of subject-matter and of construction are immaterial and insufficient.

We admit that the two records are practically identical, but insist that this is unimportant as an element of estoppel. Separate suits against separate makers of notes, identical in tenor, would naturally be identical in pleading, and might be practically identical in issues, defenses and evidence; but if the makers were different there could be no claim of estoppel for the foregoing reasons.

It is asserted that the Hart Steel Company is the "selling agent"—is the "selling organization"—of the Elyria Company, which fabricated the infringing Tie Plates, and that Guilford S. Wood is the "local manager" in Chicago, of the Hart Company.

The relations of manufacturer and sales agent, and of employer and employe are not such, in all cases, that the acts of the latter bind the former. Moreover, innumerable cases could be cited of separate suits against the manufacturer, the seller and the user of the same article. Nowhere has it ever been contended that the determination of one such suit determines the others. In fact, it is a canon of the patent law that the patent grants three separate and distinct rights, i. e., that of manufacture, use and sale, each of which can be separately assigned and separately enforced.

Birdsall v. *Shaliol*, 112 U. S. 485.

Moreover, **no recovery** could have been had in the Ohio case for profits **on the sales** by the Hart Company; and **no injunction** granted by the Sixth Circuit Court **could have prevented** those sales by the Hart Company.

Passing over the allegation that the Elyria Company owns all of the stock of the Hart Company and that one W. S. Miller is, or was at one time, the president of both companies, as utterly immaterial, we point out again that each corporation is a separate, distinct legal entity, each is endowed by law with separate rights and subject to separate prosecution; each is alone responsible for its own acts.

But, even if the ownership of all the stock of the Hart Company by the Elyria Company could have some bearing, we submit that the Elyria Company does not own all the stock in Guilford S. Wood, nor is the Elyria Company responsible for his acts, nor is he responsible for the acts of the Elyria Company.

There is, of course, no doubt that an agent is bound by a decision against his principal, and that a decision against an agent will, *within the scope of his agency*, bind his principal; but this rule applies only where the same right is asserted in the two cases, and where the agent is charged in the same capacity. In the cases under consideration, the *rights* asserted are wholly separate and distinct as against the Elyria Company on the one hand and the Hart Company and Wood on the other; and in such case the degree of intimacy of the relationship of the several defendants is quite unimportant.

If, however, the two defendants in the Hart suit had undertaken the expense of, and had directed and

controlled the defenses of, the Elyria suit, and if their acts in this regard had been "open and notorious," that is, if they had been known to the plaintiff, the Railroad Supply Company, they would have been bound by or protected by the decree in the Elyria suit, *but that was not the situation here.*

There is not *one scintilla of evidence* to show that either the Hart Company or Wood even knew of the Elyria suit. Much less is there any showing that they or either of them had any part therein. Moreover, there is no allegation, much less proof, that either the Hart Steel Company or Wood, or both, gave notice to the Railroad Supply Company or its counsel, of any participation by them or either of them in the Ohio suit, or that the Railroad Supply Company, or its counsel, had knowledge of such fact; if it was a fact. There is not a single word of evidence in the record of either suit, that the Hart Company or that Wood participated or assisted in, directed or controlled, or had anything to do with the defenses of the Elyria suit.

But, our adversary points out that the Santa Fe Railway Company, in ordering the infringing Tie Plates from the Elyria Company, through the Hart Company, "guaranteed both companies against loss by reason of patent infringement"; that it has had practical control and charge of the suits and employed and paid counsel for all defendants; and that complainant and its counsel were well aware of both the guarantee and defenses by the Railway Company and made proof of these facts." (Reed, Main Brief, p. 9.)

The brief cites from the record, Vol. 2, p. 853; Vol. 3, p. 1399; Vol. 1, pp. 227-295, etc., in substantiation of these allegations.

We respectfully submit that the record, neither at the places cited, nor elsewhere, will bear out the assumption of counsel and that his statements are not founded upon fact and are dehors the record.

There is no proof of the relation of the Hart Company to the Elyria Company, except that offered by the witness McKee, who was not an officer of the Elyria Company, but merely an employe. McKee made no such claim as is made by counsel, in the brief, but merely stated that the Hart Company was "the selling *organization*" of the Elyria Company—not generally and for all of its business, but only as to a *part* of its business. There was no pretense or intimation that any general or special agency existed, or that the Hart Company had any power as an agent to bind the Elyria Company as its principal. McKee stated that this "selling organization" existed only "in so far as it affects the materials they sold to railroads." (McKee Dep., Q. 6, R. Vol. 1, p. 488.)

McKee's statements are so inconclusive and at best so uncertain as to make it impossible for the court to determine therefrom the real relations of the parties; and being merely an employe, his statements are, moreover, *ultra vires*, and not conclusive.

Nor does the answer to Q. 3 in the Miller deposition (R. Vol. 2, p. 839), help our opponents in this regard, because the question was, "Is it a fact, *as stated* in the deposition of defendant's witness Mc-

Kee," etc. There is no proof in the record that the relation of principal and agent existed between the Elyria and Hart Companies or between the Elyria Company and Wood.

Clear and definite proof establishing the fact of actual agency is indispensable, before the harsh doctrine of estoppel will be invoked. Moreover, such a remedy should never be based upon the mere conclusion of a witness, or statement of counsel.

> "According to Coke, an estoppel 'must be certain to every intent'; and if upon the face of the record, anything is left to conjecture, as to what was necessarily involved and decided, there is no estoppel in it when pleaded and nothing conclusive in it when offered as evidence."
>
> *Russell* v. *Place*, 94 U. S. 606.

(c) The Santa Fe Railroad is Neither a Party Nor a Privy.

But counsel asserts here, as it urged in the Seventh Circuit Court of Appeals, that the Santa Fe Railroad Company, being under contract so to do, defended *both* the Hart and Elyria suits, was therefore in privity with the defendants in each suit, and was entitled to the protection of the decree in the *Elyria* case. (Reed, Main Bf., pp. 6-7.)

We deny the premises. The Santa Fe Railroad was *not under contract* to defend the Elyria Company. There is nothing in the record to show that it did in fact conduct and control the defense in the Ohio case. Its contractual relations were with the Hart Company and *with the Hart Company only.* (See admission of counsel, R. Vol. 2, p. 854.)

The Santa Fe Railroad Company was not a party to either suit. *It carefully avoided intervention.* Counsel very reluctantly and grudgingly admitted the connection of the Santa Fe with the Hart Company. In his brief on the merits, both in the Ohio as well as in the Illinois (Hart) case, counsel devoted an entire chapter in answer to our contention that the acts of the Santa Fe Railroad Co., in taking a license under the patents in suit, and in purchasing from the Railroad Supply Company, *pendente lite, millions of its Tie Plates, estopped* the Santa Fe Railroad Company, and much less the defendants in these suits, from contesting the just demands of the patent owner. Counsel for defendant has adroitly played the game of "Heads I win, tails you lose," in both cases.

Even if the Santa Fe Railroad Company could, in a proper proceeding, be held estopped on the demand of the patent owners, it does not follow that the patent owners could be estopped on the ground of *res adjudicata* on the demand of the Hart Company and Guilford S. Wood. These latter may not claim the benefit of an estoppel, if one exists, in favor of the Santa Fe Railroad, who is not a party nor a privy to these proceedings.

If the ground on which the motion was made, was valid, in favor of the Santa Fe Railroad Company, that company was not before the Seventh Circuit Court asserting its right.

(d) Estoppel, If It Existed, was Waived.

Counsel cites *Sheldon* v. *Patterson,* 55 Ill. 511 (Reed Main Bf. p. 10) in support of his position that the Sixth Circuit decree was presented by way of evidence and was therefore properly before the court, even though not pleaded.

Without discussing that proposition, we point out a qualification to the rule thus invoked, namely: that the prior judgment will not be received under such circumstances as *conclusive evidence.* This is upon the ground that a party *may waive* the benefit of an estoppel. In such circumstances, the party will be "held to have elected" to waive it, "*by not pleading it,* when he had an opportunity of so doing."

Sheldon v. *Patterson, supra,* citing
2 Smith's Lead. Cases, and other cases there cited.

There was no supplementary answer or other pleading in the Illinois case, setting up the Ohio judgment as an estoppel, such as might have been made under the authority of rule 19, and *there was no evidence* taken in the Illinois case, properly introducing the Ohio judgment. Such a defense may not be lugged into a case for the first time on appeal. upon a mere motion, even if accompanied by extraneous documents or supported by *ex parte* affidavits.

1 Chan. Pl. 509.
Walker on Pats. 3rd Ed., Sec. 407.

Standard Sanitary Mfg. Co. v. *Arnot,* 135 F. 750 (C. C. A. 3rd).

Warren Featherbone Co. v. *DeCamp et al.,* 154 F. 200, and cases there cited.

The question of estoppel, presented by a motion and an *ex parte* affidavit, was not properly before the court. Hence, no proof having been properly introduced, the defense of estoppel was properly overruled *as having been waived.*

Even the government may not enforce a statutory provision for the cancellation of patents to lands except within the period provided in the statute for the bringing of suit to annul and vacate the grant. And, where the government has by laches thus waived its right, the patent stands as against the United States as though it had originally been a valid grant.

U. S. v. *Chandler-Dunbar Co.,* 209 U. S. 447.

U. S. v. *Winona Ry.,* 165 U. S. 463.

U. S. v. *N. O. Pac. Ry.,* 235 Fed. 833, C. C. A. 5th Cir.

(e) Defendant's Laches.

The Hart Steel Company and Wood have not only waived all benefit of an alleged estoppel, but their *laches* in not presenting the matter earlier was so manifest from the facts, that the motion was properly denied.

There was no pleading or other proceeding in either the Ohio or Illinois case, even tending to show that a judgment in the one case would be binding upon the parties in the other case. There was no

pleading or other proceeding in either case, by either defendant, claiming or attempting to show privity between the defendants in the two cases. On the contrary, privity was constantly and strenuously denied by the defendants in both cases.

The defendants permitted the two suits to proceed separately and each to proceed to a decree in the respective District Courts. *They permitted two separate appeals to be perfected and tried without any suggestion of privity or of estoppel.* They filed a voluminous brief on the merits in the Hart case on appeal, without raising any question of privity or of estoppel growing out of the Ohio case. They waited until the Hart case was ripe for hearing in the Seventh Circuit Court of Appeals, without any suggestion of privity between them and the defendants in the Ohio case, or that the Ohio case would abate or control the Hart case.

As a matter of fact, it was *agreed by counsel* for all the parties that the Ohio and the Illinois suits were separate and distinct, although based upon the same Letters-Patent; and that while running concurrently, should nevertheless be treated independently of each other. Moreover, all the parties acted upon this agreement up to the time that this improper motion was made.

Surely then, a private party by his own delay in presenting to a court what he claims is sufficient to estop his adversary from prosecuting an action against him, may waive his right to enforce that estoppel.

"The law does not favor a sleepy suitor," and equity will not assist one, especially where he him-

self has been speculating with the court. He does not come into equity "with clean hands."

The defendants "speculated, so to speak, with the courts, in not pressing to the court's attention in one or the other cases, the alleged privity of the parties defendant—or in not bringing in the Santa Fe Railroad as a party intervenor in one or both cases and early moving to suspend proceedings in one suit to await the outcome of the other suit. The fact of the matter is that the defendants *did not want* to have the decision in one suit bind them in the other. They took their chances upon the outcome and lost. It is, therefore, without equity that they now seek the application of this harsh remedy of estoppel.

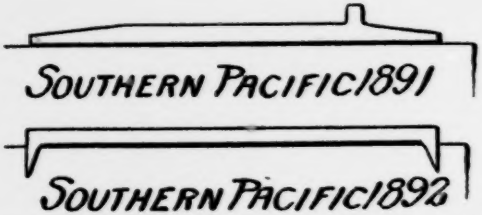
It is submitted, therefore, that the motion was properly denied because there was no res adjudicata in fact and none properly before the Seventh Circuit Court either by pleading or evidence. Furthermore, we submit, that if the motion had any merit whatever, it properly failed both on the ground of laches and on the ground of waiver.

XIV.

INVENTION—WOLHAUPTER'S TIE PLATES.

Tie Plates first of wood shingles and then of metal were used prior to Wolhaupter's patents. These metal Tie Plates were of various forms as indicated in the diagrammatic drawing exhibit 56 (R. Vol. 1, p. No. 199 following p. 114). Every one of the Tie Plates there shown prior to Wolhaupter's 1895 patent has a *body of uniform thickness,* like the metal plates first used in 1870, on the Pennsylvania Railway.

These flat plates were followed by those having a side shoulder, intended to prevent lateral rail movement, and then by Tie Plates having lower tie-engaging projections, some with and some without a rail sustaining top shoulder, thus:

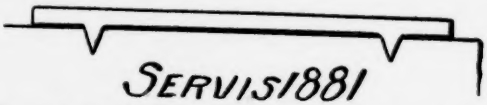


In every instance, prior to Wolhaupter, shoulders to prevent lateral rail movement and lower tie engaging projections were developed and modified in various ways *without* modifying or changing

either the *flat top* of the plate or altering or changing its *uniform cross-sectional diameter or thickness.*

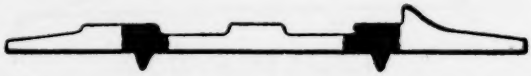
Thus the Goldie "claw" and the Goldie "cross-rib" Tie Plates were all of *uniform thickness throughout the body.*

The Servis plate and the channel plate were of uniform cross section, the body of the plate being of one thickness throughout.

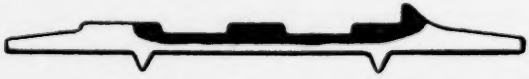


So far as Claim 8 of the first Wolhaupter patent is concerned, the invention may be said to have consisted in taking the old Servis 1881 plate, or Southern Pacific 1891 plate, or Goldie 1892 plate, and so *changing* and *reorganizing* the *structure of the body* of the plate, to provide therein a *new feature* not before used in Tie Plates, namely: **A series of raised rail-supporting flanges** and at the same time so disposing the metal of the body and the location of the tie-engaging ribs relatively to the rail-supporting flanges, as to produce the necessary co-operation between these several parts, and to produce a plate having the characteristics necessary for a successful plate of the type produced.

In the invention of the Tie Plate of the second patent in suit, Mr. Wolhaupter improved on the specific construction of his first patent by locating the tie engaging ribs *vertically in line* with the rail-supporting flanges above them, thereby producing improved results due to the conjoint action of these elements when so arranged.



In the production of the device of the third patent in suit Mr. Wolhaupter may be said to have taken the Southern Pacific Tie Plate of 1891 and by an entire reorganization of the body of that plate, he provided in connection with its rail-abutting shoulder, a *series* of elevated rail-supporting surfaces and a plurality of *intervening grooves running transversely of the plate, and parallel with* and adjacent to the shoulder. He thereby produced entirely novel and advantageous results, and a plate that was better, stronger and more durable because of the special relation of the grooves to the shoulder.



If, prior to the Wolhaupter patents, there had existed; first, a plain, flat rectangular metal Tie Plate; second, such a plate with a series of rail-supporting flanges on its top surface; third, such a plate with a rail-abutting shoulder, and fourth, such a plate with a tie-engaging projection, and if one had applied the old rail-supporting flanges and the old tie-en-

gaging projections to the old plain plate, or had added the tie-engaging projections to the shouldered plate or the shoulder to the plate with tie-engaging flanges, *without modification of these elements or of the body of the plate* and without producing any new co-operating effect, the question whether or not Wolhaupter had made an invention or had merely produced an aggregation of separately old devices, might fairly arise.

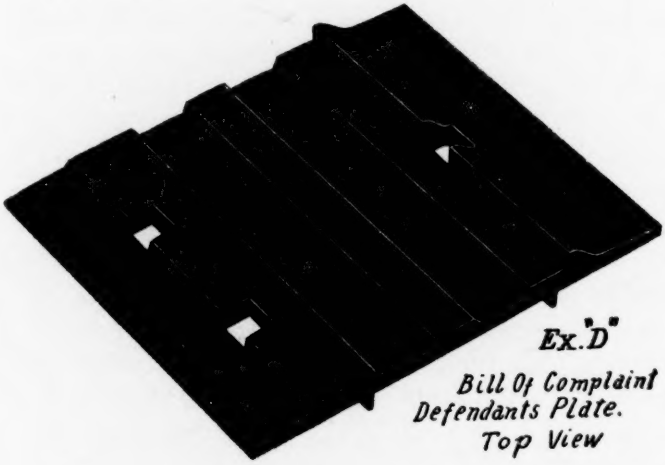
BUT NO SUCH QUESTION CAN ARISE HERE BECAUSE Wolhaupter's improvement was not merely *adding* a shoulder, or *adding* a projection, or *adding* rail-supporting flanges.

Wolhaupter's improvement, in one instance, was in making a Tie Plate with a *series* of rail-supporting elevations or flanges, and tie-engaging projections. Wolhaupter's improvement in another instance was in making a Tie Plate with a rail abutting shoulder and a *series* of rail-supporting elevations or flanges *running across* the plate, or in the *same direction* as the shoulder. In the case of each of these improvements, set forth in the several claims sued upon, the *improvement was in correlating these various features* and developing a plate containing such features **by means of a definite modification of the body of the plate itself.**

Wolhaupter did not take an old flat Tie Plate and fasten an old flange or an old shoulder on its top surface and an old rib on its bottom surface. He developed out of the *body of the plate* the *series of elevated* rail-supporting surfaces, not before used in any practical Tie Plate, and the bottom ribs, by

modifying the *cross-sectional form of the plate itself.*

Similarly, Wolhaupter did not take an old flat Tie Plate and fasten on its top surface an old shoulder, and old rail supporting flanges running lengthwise of the rail, but he developed a Tie Plate having these features by *similarly modifying the cross-sectional form of the entire plate.* In so doing Wolhaupter did not produce mere aggregations of old devices, unrelated to each other, but he made a new Tie Plate having these features, *one of which* (*the series of rail-supporting elevations*) had not been shown in any prior patent or publication and had not before been in practical use on Tie Plates.



These several features were produced, arranged and correlated in a particular way to give proper support to the rail. They were arranged to give proper bearing of the plate on the tie. They were arranged to provide strength where

strength was needed, and at the same time to provide such lightness of weight as would be consistent with strength and durability. These and other necessary characteristics of a perfect and practical article as a whole, and one that would be economical to fabricate and also economical to the purchaser (for Tie Plates are sold by *weight*), were necessarily involved in the "concept" of his inventions and in the production and correlation of its several parts in reducing them to practice.

That this was invention, and was not aggregation, and that each of the elements of the patented Tie Plate modifies the action of each of the other elements is readily demonstrated. The primary purpose of a Tie Plate is to transfer the wear due to the inevitable rail movement from the surface of the tie to the surface of the Tie Plate. The function of the series of rail-supporting flanges is to prevent destructive abrasion of the plate while properly supporting the rail. The function of the more or less sharpened ribs on the bottom of the plate is the anchoring of the Tie Plate to the tie to prevent track spreading, to distribute the load and to insure that the wear due to inevitable rail movement shall come solely on the plate and not on the tie. The provision of a series of rail-supporting flanges on the plate permits such rail movement without injury to the plate. (See Exhibit 48, Rec. Vol. 1, p. 109.) If the plate were not anchored to the tie, wear would take place between the plate and the tie, and the rail-supporting flanges would fail to perform their function. If the rail-supporting flanges were absent, the anchoring of the plate to the tie, by confining the wearing ac-

tion of the rail to the plate, would merely increase the difficulties due to rapid wearing of the plate.

Anchoring the plate to the tie serves to confine the wear to the top of the plate, and providing the plate with rail-supporting flanges serves to give the plate the durability necessary for successful and economical use. Therefore, there is co-action between the rail-supporting flanges and the tie-engaging ribs.

Similarly, in the cases of the combinations claimed in the second patent, the tie-engaging ribs or projections arranged parallel with and beneath the rail-supporting flanges, serve to form, in the Tie Plate, a series of vertically deep girders, giving increased rigidity to the plate and transferring the strains due to the load directly from the rail to the tie.

Likewise, in the patented plate, as claimed in the third patent, the function of the rail abutting shoulders is to hold the rail from shifting sidewise on the Tie Plate while the function of the series of rail-supporting flanges, *arranged parallel* with the shoulder, is to support the rail, and to form grooves for the escape of sand and grit. Such sand and grit enters beneath the rail mainly between the tie-abutting shoulder and the rail-base, so that the grooves formed in the rail seat and *adjacent* to the shoulder serve to remove a difficulty due to the presence of the shoulder, prevent the wearing out of the face of the shoulder and the wearing out of the body of the plate at this point. The witnesses have testified that where plates buckle or bend the tendency is to bend or even break *at* the base of the shoulder. The rail resting against the shoulder

will thus necessarily cover the grooves and prevent water and brine from damaging the plate.

In all of these cases, therefore, antagonistic forces are harmonized with the result that the plate embracing these features permits, without injurious effect, the vertical movement or wave-motion of the rail, which is wholly unavoidable, and the effect of which, save for the plate, would result in tie-wear, which in its turn permits of rail canting and increases the destructive effect of the rail movement on the spikes, spreading of the rails and accidents.

Thus there is found in this simple device a nice balancing of antagonistic forces, a supplementing of functions and a modification of effect, one element by another, which responds to the most rigid requirement of the rule with respect to the true combinations as distinguished from mere aggregations.

Wolhaupter's Tie Plate is not any Tie Plate with rail-supporting flanges, a rib and a shoulder, but it is a Tie Plate having each one of its elements, as specified in its claims, wrought out, arranged and correlated in a new way, and as set forth in the several claims in issue.

The elements of a Tie Plate are joint tenants and not merely tenants in common. Each is seized *per my et per tout*. These elements do not simply combine or contribute to make a better Tie Plate, but each element modifies the action of every other element and the whole is not merely the sum of the parts, but a whole into which each of the parts is merged.

The Tie Plate of the Wolhaupter patents and the Tie Plate of the Elyria and Hart Companies are peculiar things. Their ultimate form and dimensions are determined by a number of practical considerations, viz.: economy, utility and serviceability. In order to be commercially manufactured a Tie Plate must be as light as possible. In order to be serviceable, it must be materially wider than the rail, so as to have a sufficiently large area of surface in contact with the tie. It must also have a number of other characteristics, each of which is essential to the performance of the functions of a Tie Plate. For example: Comparing the Wells rail chair to the Wolhaupter plate, it is seen at once that the rail chair is not materially wider than base of the rail, while the amount of metal in the chair would eliminate it from competition with the Tie Plate.

A Tie Plate to be commercial must also be of a form to be rolled. Desirably a Tie Plate should have the thinnest possible cross-section in its part beneath the rail, consistent with the performance of its function, and desirably also the plate is thinned toward its side edges, which extend outside of the rail.

It should be of greatest thickness or of such form as to give greatest strength where strength is required. In other words, it should have its metal properly distributed with an eye to the "function" or use of the plate not only as a whole, but as to ~~any~~ each portion one of its parts.

Referring to any Tie Plate of the prior art it will at once be seen that by *changing, deforming or modi-*

fying the *body* of the plate, functionally and in view of his inventive "concept" or "happy thought," Wolhaupter produced a novel Tie Plate having:

(*a*) A rail-supporting surface that is **discontinuous,** not merely in the sense of bending the plate away from the base of the rail, as Goldie proposed, or in the sense of wrinkling a thin plate to form corrugations which would be flattened out in service, as Dunham proposed; but having a **series of rail-supporting flanges** extending above and across the upper surface of the plate, so disposed as to sustain the weight without crushing the plate, and to be in line with the greatest load, while, at the same time, forming a series of sand grooves or drainage channels between the flanges, adapted to perform their functions as such.

(*b*) Tie-engaging projections effective to hold the plate from sliding movement on the tie and so shaped and positioned as to insure the proper support of the plate by the tie and prevent it bending or cracking under the applied load and not only efficient in themselves to perform their function as tie-engaging ribs, but also so disposed and related to the body of the plate and to the rail-supporting flanges on its top as to secure maximum strength with a minimum weight of metal.

(*c*) A rail-abutting flange or shoulder located near one margin of the plate, in *juxtaposition* to the series of channels or sand grooves, and in proper operative position relative to the elevated supports forming the rail seat all of sufficient thickness and strength to properly perform and function.

In securing all of these essential and desirable characteristics, it is seen at once that the problem was not merely that of addition to a plate, of a rail-engaging shoulder or a tie-engaging projection, or the formation of rail-supporting flanges on its top surface. Mere additions would leave the body of the plate unchanged and the rail-engaging shoulder, rail-supporting flanges or bottom ribs would appear simply as additions to the original plate. Mere addition of these elements would not necessarily produce a practical Tie Plate. **What Wolhaupter did, in producing a Tie Plate having the characteristics stated, was not addition, but IT WAS A REORGANIZATION AND RECONSTRUCTION OF THE ENTIRE PLATE, due to the conception of a plan radically different from any and all that the prior art had disclosed.**

Furthermore, the plate, considered with reference to its mode of application, must have certain characteristics. It must be capable of being driven either by hammer blows or by the weight of passing trains into a firm, continuous bearing on the upper surface of the tie without itself being distorted. The Wolhaupter plate is not one having a three-point bearing mounted on stilts, as Goldie, nor is it the Wells chair, which, to secure the full bearing on the tie, required a special cutting out or grooving of the tie to receive the flat-bottomed, rectangular rib on the bottom of the plate.

The sum of human wisdom, engineering skill and railroad experience eventuated, according to the brief filed by our adversary, in the so-called "Storey" plate. We have answered this point

more fully on page 172, *infra*. However, when the "Storey" plate was finally produced, it had every one of the characteristic features of construction, mode of operation and economy of material which are set forth in the Wolhaupter patents in suit.

In other words, it took eighteen months of Mr. Storey's time, with the wisdom of the ages behind him, merely to redesign what Wolhaupter had already described and set forth in the patents in suit, and had, long before [illegible] been embodied in actual construction, and [illegible]s of which had been delivered to Mr. Storey's road, the Santa Fe. That is to say, the mere *dimension* designing and disposition of materials in the Storey plate was the result of prolonged effort and study. Yet patentability in a broad and generic way, and the doctrine of mechanical equivalents, was denied by the Sixth Circuit Court to the man who first pointed out not only the form of these various elements, but their relation to each other and the desirability of incorporating them in one and the same plate by the special modifications of the body of the plate itself, so as to produce these various elements therefrom.

It seems to us, that never was an act of "invention" more certainly set forth by the facts in any reported decision, that is manifestly proven by the facts and circumstances of this record respecting Wolhaupter's work, and the "new and beneficial results" achieved thereby and by the wonderful acceptation thereof by his contemporaries in this art.

The Railroad Supply Company, accepting the *prima facie* validity of the patent grants, invested its capital in good faith in these inventions. They con-

stitute its greatest asset. The Seventh Circuit Court recognized these facts as highly persuasive, in connection with the foregoing points as evidence of inventive ingenuity and patentability (Rec., Vol. III, p. 1435).

XV.

IN CONCLUSION.

We stand on the *prima facie* validity of each of these Wolhaupter patents, supported by immediate adoption and use by some and in due course by practically all of the thirteen hundred railroads of this country.

We point to the time and capital invested by the Railroad Supply Company, based in good faith upon the *prima facie* validity of these patents, as a circumstance and an equity to be considered.

We call attention to the Gold Medal Award on the Wolhaupter Tie Plate by the international jury at the St. Louis World's Fair, for an epoch-making invention—the only award on a Tie Plate made at that fair.

We point to the acquiescence of "the trade" by the circumstance that during the *entire seventeen-year term* of the Wolhaupter first patent, but two instances of infringement appeared. The one at bar was induced by the Santa Fe Railroad, while the other was promptly merged into the Harriman license.

We point to the acquiescence (against interest and therefore all the stronger) by the officials of the Southern Pacific Railway and the great Harriman System in the taking of the license.

We point, with justifiable assurance, to the enormous *excess of sales* of the patented "corrugated" plate over the sales of *all other types,* and particularly to the excess of sales over those of its nearest rival, the Servis Tie Plate—demonstrating, in the circumstances herein shown, great utility and patentable invention.

We point to the fact Wolhaupter's invention marks a dividing line in the art, all prior patented Tie Plates and those on the market being "flat top" plates.

We point to the very able reasoning of the court in the Hart case, as *more persuasive* than that of the Sixth Circuit Court of Appeals, first because it is sound and logical, and secondly, because the Seventh Circuit Court must have been convinced beyond "all reasonable doubt" of the validity of the Wolhaupter patents or it never would have dissented from the finding and reasoning in the Sixth Circuit.

We insist that, as the record shows no case of anticipation or of prior use, the patents in issue are valid.

Finally, we insist, respectfully but as firmly as we may, that this court cannot consistently hold validity of these patents and deny their infringement, and that any doubt as to either point must be resolved in favor of the patents.

The order of the Seventh Circuit Court of Appeals, reversing the decree of the District Court for the Northern District of Illinois, in No. 67, should be affirmed. The order of the Sixth Circuit Court of Appeals affirming the decree of the District Court for the Northern District of Ohio, in No. 95, should be reversed, with directions, etc., with costs in this and the lower courts in both cases payable to the Railroad Supply Company.

Respectfully submitted,

TAYLOR E. BROWN,
Counsel for The Railroad Supply Company.

CLARENCE E. MEHLHOPE,
Of Counsel.

Chicago, Ill., 30th Jany., 1917.

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SUPREME COURT OF THE UNITED STATES.

OCTOBER TERM, 1916.

No. 95.

THE RAILROAD SUPPLY COMPANY,
PETITIONER-PLAINTIFF,

v.

THE ELYRIA IRON AND STEEL COMPANY,
DEFENDANT.

SUPPLEMENTARY BRIEF FOR DEFENDANT.

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L. H. Lane, Law Printer, 221 High Street, Boston.

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SUPREME COURT OF THE UNITED STATES.

OCTOBER TERM, 1916.

No. 67.

THE HART STEEL COMPANY AND GUILFORD S. WOOD, PETITIONERS-DEFENDANTS,

v.

THE RAILROAD SUPPLY COMPANY, PLAINTIFF.

No. 95.

THE RAILROAD SUPPLY COMPANY, PETITIONER-PLAINTIFF,

v.

THE ELYRIA IRON AND STEEL COMPANY, DEFENDANT.

SUPPLEMENTARY BRIEF FOR DEFENDANTS IN BOTH CASES.

We submit this brief in behalf of the defendants in both cases as a supplement to our main brief for the purpose of presenting from a somewhat different point of view the issues of the patentability of the alleged tie-plate inventions shown, described and claimed in the three Wolhaupter patents in suit and of the alleged infringement of those patents by the tie plates made by the Elyria Iron & Steel Company and sold by the Hart Steel Company to the Atchison, Topeka & Santa Fe Railroad, and further to accentuate some of the positions of our main brief which we

believe that the court will find conclusive in favor of the defendants.

In our main brief we have set forth propositions which seem to us decisive of this case, viz., that, after the final decree in the Elyria case dismissing the bill of complaint, the Court of Appeals for the Seventh Circuit erred in not holding that the plaintiff in the Hart case was bound by that decree, and in not dismissing the bill of complaint in the Hart case (Main brief, pp. 8–17), and that the Wolhaupter patents in suit are void for lack of invention in view of the prior art (Main brief, pp. 18–28), and are not infringed. (Main brief, pp. 80–84.)

We call attention particularly to the clear showing in our main brief (pp. 72–80), that the Wolhaupter patents do not show or describe tie plates of commercial value. In fact no tie plates as shown and described in those patents were ever put into commercial use.

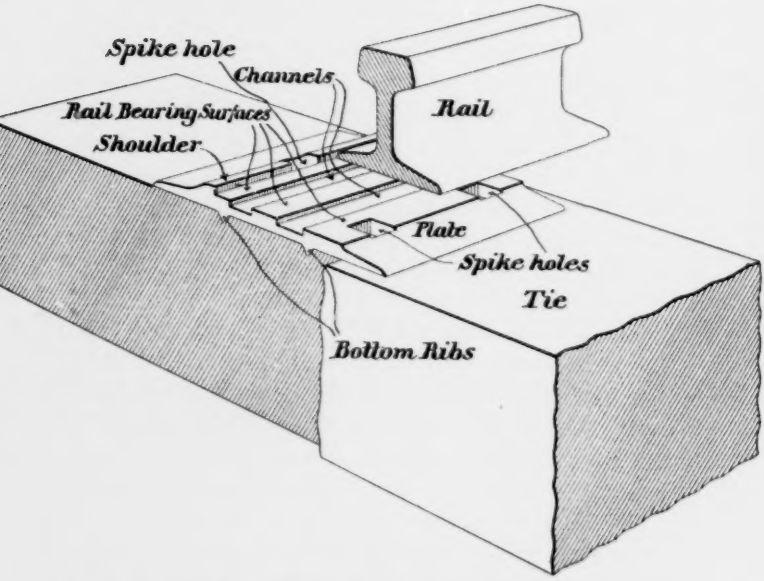
The patents are mere paper patents. If there were doubt as to their validity and as to non-infringement, the plaintiff has shown nothing in the history of the alleged inventions which might incline the court in its favor as to those issues; but we respectfully submit that on the record there can be no doubt that the Wolhaupter patents are lacking in patentable quality and are not infringed. If this be so, no amount of commercial success could cure the fatal defects in plaintiff's case.

> *McClain* v. *Ortmayer,* 141 U.S. 419, 428.
> *Grant* v. *Walter,* 148 U.S. 547, 556.
> *Duer* v. *Corbin Cabinet Lock Co.,* 149 U.S. 216, 224.

In this supplementary brief, and strictly in confirmation of the propositions for which we contend in our main brief, we shall, after a few preliminary statements, approach the issues from the point of view of the defendants' alleged infringing tie plate, illustrated in the cut on the opposite

page, and deal specifically with the features of that plate in comparison with the features of the tie plates of the art prior to Wolhaupter, discussing somewhat in detail the functions and modes of operation of the different tie plates involved in this controversy. We insist that we thus demonstrate that the Wolhaupter patents in suit, if valid, cannot be construed so as to cover the defendants' tie plate.

Defendants' Tie Plate



Our first proposition is that the defendants' tie plate cannot be within any patent for an invention made at the dates of the alleged inventions of the patents in suit, for when compared with the art prior to those dates, it does not embody any patentable invention over that prior art.

In other words, the prior art was such at the dates of the Wolhaupter inventions that neither he nor anyone else could then take a valid patent which would cover defendants' tie plate, for it embodied no patentable invention over that prior art. The defendants' tie plate is merely a mechanical and unpatentable variant of what was then old. Therefore, if the Wolhaupter patents cover defendants' tie plate, they must be invalid. If valid, they cannot be infringed.

This conclusion is inevitably reached from every point of view. We shall first show that the defendants' tie plate is nothing but a well known and widely used form of tie plate of the prior art, modified by cutting in its top surface channels or grooves parallel to the rail so as to save weight and material, and that this modification could not have involved patentable invention because long prior to Wolhaupter such treatment was a common practice in all the arts dealing with metal devices where the saving of weight or material is important, and because it was a common and well known practice in the specific art of tie-plates.

Secondly, it will appear that there is nothing patentable in the defendants' tie plate as compared with the prior art, because in that plate there are merely aggregated or brought together certain well-known features of old tie plates, each of which operates in the defendants' tie plate in exactly the same way and with exactly the same function and result as in the tie plates of the prior art, with no new result from the aggregation other than the sum of the old results of each acting independently. There is nothing patentable in such an aggregation (authorities, *infra,* p. 31).

This demonstration that the defendants' tie plate embodied no patentable invention over the art prior to Wolhaupter, necessarily establishes the fact that, no matter what may be the scope of the Wolhaupter patents, they

cannot be both valid and infringed. They can only be valid if they describe and claim inventions patentable over the prior art, and inasmuch as the defendants' tie plate does not embody any invention patentable over that art, it cannot infringe the Wolhaupter patents, or any other patents of Wolhaupter's dates, or else the Wolhaupter patents are invalid.

If the court agrees with this view it will be unnecessary for it to examine the Wolhaupter patents and to construe them.

But as the court may feel that our presentation of the case would be incomplete unless we approach the issues of the validity of the Wolhaupter patents in suit and of infringement by the defendants' tie plate by the more orthodox method of determining definitely by a careful reading of the specifications what those patents describe and claim, comparing the tie plates therein shown and described with the prior art, and considering whether the alleged inventions therein set forth and claimed (assuming that the conclusion is reached that the patents are not absolutely invalid for lack of patentable quality), are embodied in the defendants' tie plate, the second portion of this brief (p. 35) will take up the matter from this point of view. In that second portion we shall show that the defendants' tie plate does not embody any of the alleged inventions which are described and claimed in the Wolhaupter patents in suit, and that if the claims in issue of those patents were construed so broadly and vaguely as to read upon the defendants' tie plate, they clearly would be anticipated and invalid in view of the prior art. This conclusion, that the Wolhaupter patents in suit cannot be both valid and infringed, is the same that is reached by merely comparing the defendants' tie plate with the prior art, as we do in the first part of our brief, without such full consideration of those Wolhaupter patents.

THE PATENTS AND THE CLAIMS IN ISSUE.

For the convenience of the court we here identify by name, number and date the Wolhaupter patents in suit and the claims in issue.

The Wolhaupter patents in suit and the claims in issue are as follows: —

No. 538,809, issued May 7, 1895, for a "Tie Plate", to B. Wolhaupter on an application filed March 13, 1895. (Rec. p. 11.)

No. 691,332, issued January 14, 1902, for a "Railway Tie Plate", to B. Wolhaupter on an application filed May 3, 1897, and renewed November 9, 1901 (Rec. p. 15), and

No. 721,644, issued February 24, 1903, for a "Tie Plate", to B. Wolhaupter on an application filed March 31, 1902. (Rec. p. 18.)

The claims in issue are as follows: —

No. 8 of patent No. 538,809.

Nos. 1, 2 and 3 of patent No. 691,332, and

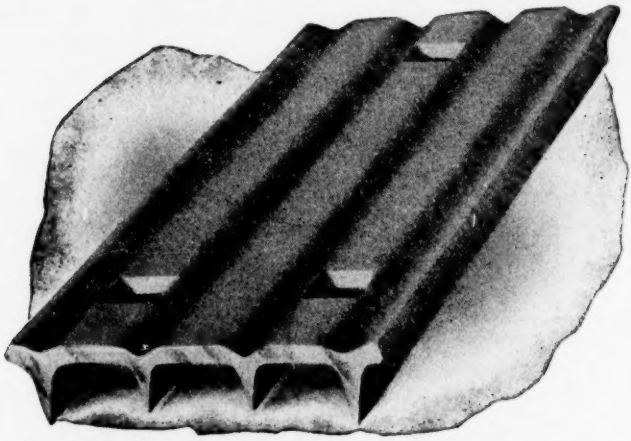
Nos. 7 and 9 of patent No. 721,644.

The Railroad Supply Company, owner of these patents, owns many other patents on tie plates, and manufactures tie plates under them. (Bell, Rec. p. 80, Q. 6.)

It is not pretended that any tie plate of either the second or third Wolhaupter patents was ever made.

The plaintiff does not now make, and has not made for the past twelve years, any tie plate in the least resembling that shown and described in the first Wolhaupter patent in suit. More than twelve years ago it made a comparatively small number of tie plates, which are alleged to have had some, but not all, of the features of that patent. (Bell, Rec. p. 129.) Their resemblance to the tie plate of the first Wolhaupter patent in suit was superficial only. These plates, illustrated in Plaintiff's Exhibits No. 24 and

No. 25 (Rec. pp. 83, 84), of which we here reproduce No. 24, had deep flanges on the bottom and shallow grooves



"Exhibit No. 24," Illustration Wolhaupter Tie-Plate.
(A comparatively small number made twelve years ago.)

in the top. Both flanges and grooves in these plates were parallel to the tie and formed a sort of truss construction something like that of the plate of the first Wolhaupter patent in suit. The plates had nothing for the rail to abut against, so that the rail bore directly against and cut the necks of the spikes. The organization of these plates was entirely different from that of the defendants' alleged infringing plate, and their features have no counterparts in that plate.

The alleged infringing tie plate was designed by Mr. Storey, Chief Engineer of the Atchison, Topeka & Santa Fe Railway System (Rec. p. 308, Q. 10; p. 316, Q. 66). It is Defendants' Exhibit R. In the fall of 1908 the Atchison Railway gave an order for upwards of 5,000 tons (1,500,000) of these plates to the Elyria Company, defend-

ant in suit No. 95, through the Hart Company, the selling agent of the Elyria Company and the defendant in suit No. 67. (McKee, Rec. p. 496, X-Q. 52.) *The manufacture and sale of these tie plates placed for the first time this specific form of plate upon the market.* This manufacture and sale constitute the alleged infringements in these cases.

It was not until December, 1908, after suit had been brought against the Hart Company, that the plaintiff began to market this same form of tie plate. (Bell, p. 134, X-Q. 197.)

The alleged infringing tie plate was therefore developed commercially by the defendants, not by the plaintiff. This is admitted by the plaintiff's president and treasurer, Hawley. (Rec. p. 74, X-Q. 57.) *The defendants' plate is not a development in any sense of the Wolhaupter patents in suit or any of them, nor of any Wolhaupter tie plates.*

This is distinctly not a case in which the courts will be inclined to deal favorably with a patent because the patented device made by the plaintiff has proved of commercial value and has been copied by the defendant. Here the reverse is true. The defendants' tie plate is totally unlike the tie plates of any of the patents in suit or any previously manufactured by the plaintiff and was independently developed and first placed upon the market by the defendants. The defendants did not follow or copy the plaintiff, but the plaintiff imitated them. (See our main brief, pp. 81–84.)

We shall show that the claims in issue of the Wolhaupter patents in suit are anticipated, that they are void for lack of invention, and that when read, as they must be, in view of the description and drawings of the patents and n view of the prior art, they are not infringed.

RES ADJUDICATA.

We need not review in this brief the history of the litigation which has been brought to a head in this Court. The facts on which we rely are fully stated in our main brief, pp. 8–17. It suffices to say here that we submit that the plaintiff was bound by the final decree dismissing the bill of complaint in the Elyria case and that the Court of Appeals for the Seventh Circuit erred in not so holding in the Hart case.

TIE PLATES.

The subject of each of the three Wolhaupter patents in suit is a tie plate.

A tie plate is primarily an iron or steel plate about three-eighths of an inch thick and about six inches wide by eight inches long. It is inserted between a railroad rail and the tie for the purpose of providing a broad bearing on the tie and thereby preventing the cutting of the rail into the tie. A secondary purpose of the tie plate is to unite the rail and the tie in such a manner as to assist in resisting the "spreading" or lateral movement of the rail on the tie.

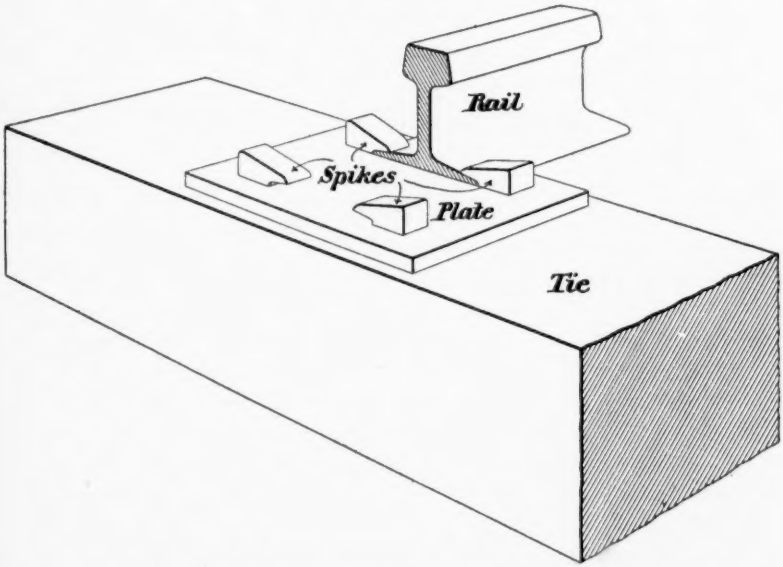
Years ago when hard wood ties were plentiful and cheap, and when rails and rolling stock were light, there was but little necessity for a tie plate, because the rails did not cut into the tie, and the spikes which held the rail in place were firmly held by the hard wood tie.

Gradually the supply of hard wood ties has diminished and the rails and rolling stock have become heavier and heavier, so that in modern times there is a wide need for a tie plate, particularly at curves and places where the traffic is heavy and the strains on the rails are great. (Rec. p. 101.)

The earliest form of tie plate as used by the Pennsylvania Railroad in 1870 or thereabouts was a plain flat

plate punched at suitable places for the spike holes. (Bell, Rec. p. 106, Q. 46.) It is illustrated in the accompanying drawing.

Flat Tie Plate

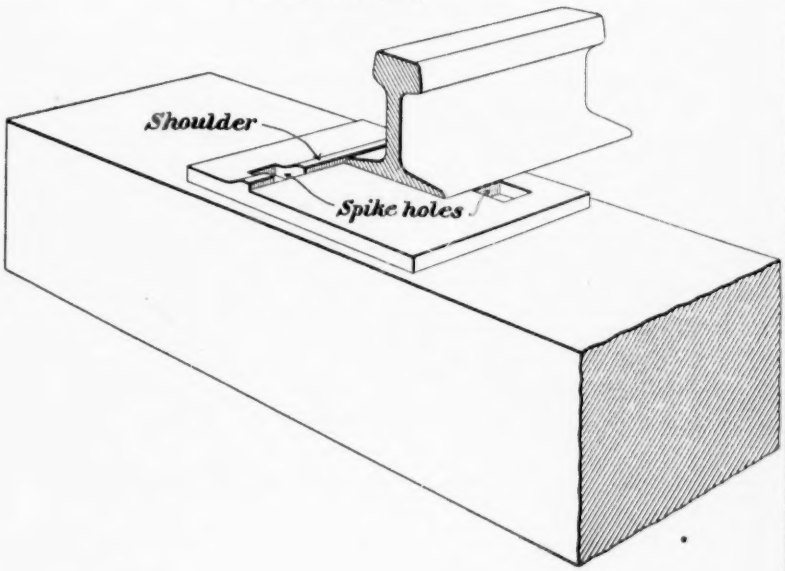


This plate adequately protected the tie from the cutting of the rail, and it also caused the spikes on both sides of the rail to act together to prevent the rail from "spreading", because all the spikes are tied together, so to speak, by the plate. (Rec. p. 103.) Without a plate the spikes on the outside of the rail are the only ones to resist the outward lateral strain of the wheel flange against the rail and the consequent tendency of the rails to spread or separate, and the inner spikes do not assist the outer spikes in performing this function. With a tie plate, even of the simple type above illustrated, the rail pushes against the

outer spikes, which push against the plate, which in turn pulls on the inner spikes, so that with such a plate both the outer and inner set of spikes resist the spreading of the rails. (Bell, Rec. p. 103, Ans. to Q. 44.)

But with this plate the flange of the rail would wear into the necks of the outer spikes and weaken and destroy them and it was soon perceived that this wear could be avoided to a large extent by providing the upper surface of the plate with *a shoulder* against which the outer edge of the flange of the rail should abut, as shown in the drawing below. (Bell, Rec. p. 106, Q. 47.)

Old Tie Plate with Shoulder



This was a very common expedient in the early art. It is illustrated in a number of patents prior to Wolhaupter (Wells, No. 203,570, Rec. p. 1088, at D; Dockstader, No. 462,399, Rec. p. 1158; Goldie, No. 485,030, Rec. p. 1182, at 9; Churchward, No. 492,528, Rec. p. 1192, at A'; Servis, No. 524,868, Rec. p. 1232, at b^2, etc.) Tie plates with such shoulders went into wide use long before any of the Wolhaupter alleged inventions here in controversy were thought of; for example: the Goldie plates in 1892 (Dyer, Rec. pp. 434, 435), the Sacramento plate in 1893 (Storey, Rec. pp. 308, 309; Wallace, pp. 554, 555, Exhibit 60, drawing on second page after p. 556, p. 568), and the C. A. C. plate in 1892. (Bell, Rec. p. 190.) Plaintiff's witness Bell illustrates in Complainant's Exhibit No. 45 (Rec. p. 106) the well known form of prior art plate with such a rail-abutting shoulder.

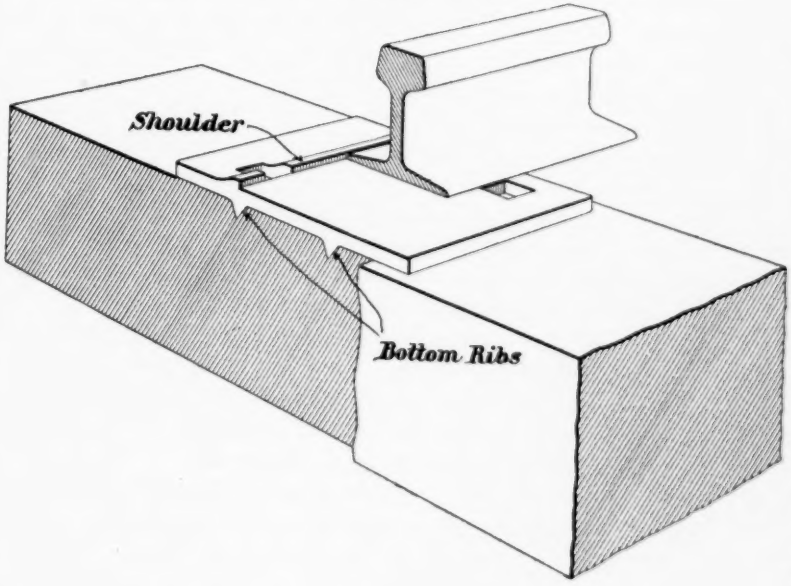
It was also perceived early in the art that it would be an advantage to provide some kind of a projection on the bottom of the plate to engage the tie and thus assist the spikes in preventing lateral movement of the plate and rail on the tie. Such projections on the bottom of the plate were employed in a variety of forms long prior to Wolhaupter's alleged inventions. The Goldie plates of 1892 (Rec. p. 820) had on the under side of the plate two V-shaped *ribs* parallel to the rail (Dyer, Rec. p. 434, Q. 12; Zimmerman, p. 529; Ambler, p. 543), as shown in the Goldie patent No. 485,030, at 17, 17. (Rec. p. 1182.) Other Goldie plates of 1891 had four claws, one at each corner. (Bell, Rec. p. 115.) The C. A. C. plate had a number of V-shaped teeth on the bottom (Bell, Rec. p. 190), as shown in the Churchward patent No. 508,086. (Rec. p. 1207.)

Tie plates embodying both the shoulder on the top and

projections of some kind on the bottom are shown in the patents above cited and in the Railroad Gazette, Vol. 24, July 8, 1892, reproduced as Defendants' Exhibit C. C. (Rec. p. 952), which shows the C. A. C. or Churchward plates, and in Vol. 24, November 11, 1892, p. 839, reproduced as Defendants' Exhibit D. D., which drawing shows one form of the prior art Goldie plate. (Rec. p. 954.)

We illustrate here a tie plate of this character known as the "Goldie Tie Plate" used in 1892 (*infra*, p. 55) as typical of this type of plate having both the rail-abutting shoulder and the tie-engaging ribs. This drawing shows the same plate as Defendants' Exhibit D. D. above referred to.

Old Tie Plate
with Shoulder and Bottom Ribs



The *ribs* on the bottom of this plate run across the grain of the tie. They sink into the tie and as they are transverse to the grain of the tie they securely prevent the plate from slipping on the tie. Being shallow and wide they do not attach the plate to the tie. They, as well as the shoulder, are present in the defendants' alleged infringing plate.

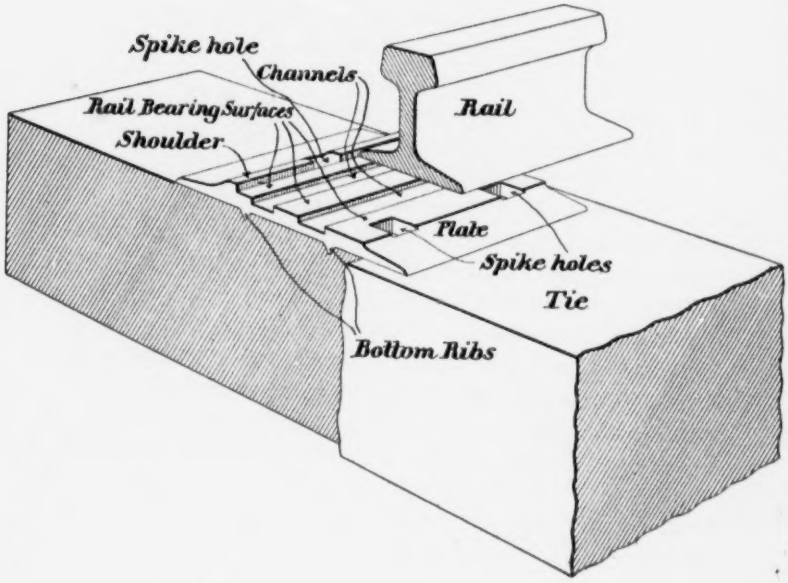
These *ribs* are to be carefully distinguished from bottom "*flanges*", which run *parallel* to the tie and are comparatively thin, sharp and deep, so that they may be driven deeply into the tie and securely attach the plate to the tie. They separate the grain of the tie like wedges and open spaces in the tie at the ends of the flanges. Such "flanges", as we shall show, admittedly do not prevent the plate from slipping lengthwise of the tie. Such flanges running lengthwise of the tie are features of the plates of the Wolhaupter patents in suit and of the "Wolhaupter Tie Plate" Exhibit No. 24 above shown (p. 7), *which the defendants' plate does not embody.* This matter we discuss more fully (*infra*, p. 38).

The old tie plate shown in the drawing on page 13 performs every essential function which a tie plate is capable of performing. (1) It *protects the tie* from the wear of the rail. (2) It has *a shoulder* against which the outside edge of the lower flange of the rail abuts, and (3) it has *ribs* crosswise to the tie on the bottom of the plate which grip into the upper surface of the tie and assist the spikes in holding the tie plate and consequently the rail in place and from lateral spreading.

Although this form of tie plate is in every respect satisfactory, it was in one small particular capable of an improvement, not however based on its character or capacity to perform its useful functions which were the same after as before the improvement was adopted. As shown in the cut on page 13, it contains more metal than

is absolutely necessary and consequently is more expensive than need be. Tie plates are sold by the ton and their number runs into the millions. If a few ounces can be saved on each tie plate, that means a saving of many dollars in the aggregate cost of the tie plates. To make the tie plates cheaper superfluous metal should be eliminated. This has always been common practice in articles made of metal. Hence when Mr. Storey of the Atchison Railway designed the defendants' tie plate, which was made and sold in the fall of the year 1908, he *modified the tie plate shown in the cut on page 13 by making two shallow channels or grooves in the top of the plate,* as shown in the accompanying cut.

Defendants' Tie Plate



From a period at least as early as 1892 when such tie plates, without the channels, were known (*supra,* p. 13) there could have been no invention involved in making such channels in the plate. Even if the channels or grooves were new with him, it could not be contended that Mr. Storey, the designer of the defendants' tie plate, made any invention when he caused those channels to be rolled in the plate to save material. He merely took out metal from places where it was not needed, thus saving about thirteen per cent of the material of the plate and thereby reducing the cost by that thirteen per cent. (Bell, Rec. p. 118.) The saving in two million plates at $40 a ton would be $34,000. (Bell, Rec. p. 118.) There are about 2,800 plates to a mile of railroad. (Isaacs, Rec. p. 455.) Two million plates would be used on about 700 miles of single track.

The plaintiff avers that these channels in addition to saving material also give opportunity for the discharge of sand, grit and water, which might otherwise accumulate between the rail-bearing surfaces and the rail. The plaintiff argues that the sand and grit, if allowed to remain between the top of the plate and the rail, might have a grinding action on the plate as the rail moves up and down on the plate as the trains pass over it. The record shows that this alleged grinding action of the sand between the rail and the plate is largely imaginary. (Storey, Rec. pp. 323, 327, 318.) It is admitted that in any event it is *very slow.* (Wallace, Rec. p. 575.)

The employment of grooves for this discharge function, whether or not of any importance, was well known in the art prior to Wolhaupter. For example, it is fully set forth in the prior patent of 1878 to Wells No. 203,570 (Rec. p. 1088), which describes such channels in a rail-supporting chair or plate, and says that they "*serve as*

receptacles for sand and grit that may enter between the chair and rail". (Wells patent, p. 1, 2d column, line 4.)

In view of the Wells patent and the other instances in the prior art, to which we shall call attention, which show tie plates and other rail-sustaining devices having channels or grooves in their upper surfaces, no one at the date when Wolhaupter made the earliest of his alleged inventions of the patents in suit could have obtained a valid patent on or covering the defendants' tie plate, because that plate is nothing but the widely known and used tie plate of the prior art already possessing the features of a rail-abutting shoulder on its upper surface and ribs across the tie on its bottom, as shown in the drawing (*supra*, p. 13), modified by cutting the Wells channels or grooves in its upper surface. This should be an end of the plaintiff's case. Inasmuch as the defendants' tie plate is an unpatentable modification of the art prior to Wolhaupter, the claims of the Wolhaupter patents in suit, if they cover such an unpatentable modification, are invalid. If they do not cover it, they are not infringed. There is no escape from the dilemma. It is fatal to the plaintiff's case.

As proof of this simple proposition, that there could have been, at the dates of the Wolhaupter inventions of the patents in suit, no patentable invention in cutting channels in the top of any prior art tie plate, we shall refer first to the many instances in the tie plate art prior to Wolhaupter where such channels in the upper surfaces of tie plates are shown and described, thus showing that ***in this particular art*** they were known and were common mechanical expedients clearly within the capacity of the ordinary designer of a tie plate who would naturally and without the exercise of the least invention make them in a plate to save weight.

Then we shall show (*infra*, p. 27) that this Court in the case of *Peters* v. *Hanson*, 129 U. S. 541, and other cases has

recognized the *general proposition* that the making of channels in iron articles of all kinds for the purpose of saving weight and obtaining other incidental advantages has been such a common expedient and practice in all the iron using arts that it is impossible to predicate invention upon it. Other courts also have recognized this general principle on which we stand in this case.

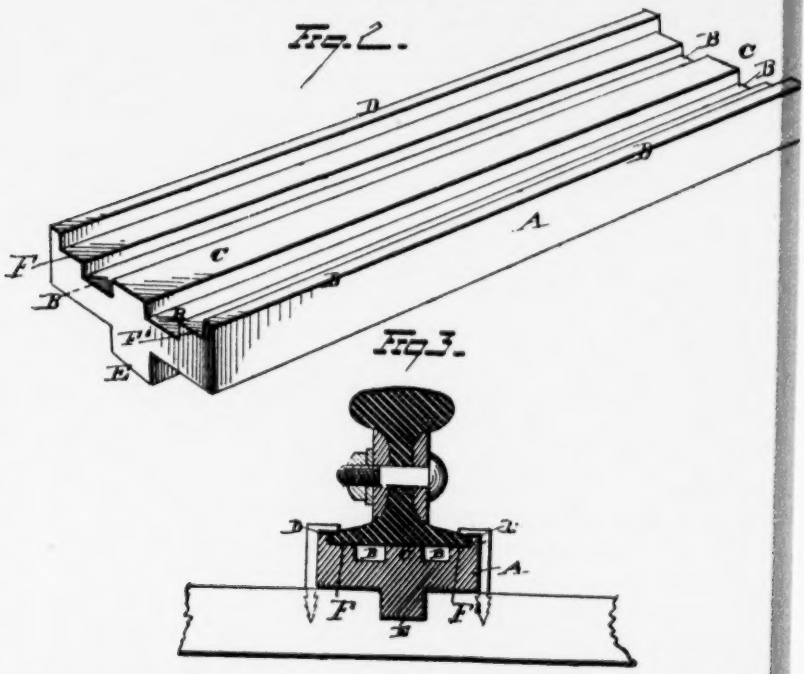
MAKING TIE PLATES WITH CHANNELS IN THEIR UPPER SURFACES VERY COMMON IN THE PRIOR ART.

When Mr. Storey designed the defendants' tie plate with these two shallow channels on the upper side of the plate he was merely following exactly what was taught by the prior art, and was not doing anything that was new with Wolhaupter in the patents in suit.

Among the patents of the prior art which show and describe such channels in tie plates and other rail-supporting devices are the following: —

The *Wells patent* of 1878, No. 203,570 (Rec. p. 1088), shows a railway chair which is in effect merely a tie plate long enough to extend over three or four ties. The Wells device is made with two longitudinal channels or grooves B, B parallel to the rail. **These channels are the exact prototypes of the channels in the defendants' tie plate.** In the device of the Wells patent, (Figs. 2 and 3 of which are here produced), as in the defendants' tie plate, the

Figs. 2 and 3 of Wells Patent.



bottom of the rail rests upon three surfaces F, C and F', which are lengthwise of the rail, the surfaces F and F' being under the sides of the rail, and the surface C under the middle of the rail. The outer side of the rail bears against the side flange or shoulder D. This is precisely the defendants' arrangement. The Wells patent explains how the rail is supported by the three bearing surfaces F, C and F' and then states: —

> "Said bearings F, F are thus separated from the central bearing C, by *grooves B, B which serve also as receptacles for sand or grit that may enter between the*

chair and rail, and thus insure a firm bearing of the rail on the chair-bearings at all times.

"The grooves B B also enable the chair to be made much lighter than the ordinary chair, and yet possess an equal amount of strength, owing to the fact that the rail is fully supported at all points where the chair is subjected to strain — namely, at its center and sides." (Wells patent, p. 1, column 2, lines 2–14.)

Thus in the prior Wells patent there is disclosed the exact arrangement of channels and rail-bearing surfaces which is present in the defendants' alleged infringing tie plate, and the functions of these channels or grooves are fully explained, viz., (1) to save weight without loss of strength, where strength is not needed; and (2) to serve as receptacles for the sand and grit.

In view of this Wells patent alone it is impossible to predicate any invention over the prior art in making the defendants' tie plate with two channels parallel to the rail exactly as shown in this Wells patent.

The purpose, function, location and mode of operation of such channels in the upper surface of a rail-supporting device being fully known and understood in the art prior to Wolhaupter, it could not have required any invention in making such grooves in a rail-supporting device, whether it be a rail chair or a tie plate. (See our main brief, p. 33.)

We submit that the plaintiff, no matter what patents it may have, cannot prevent these defendants from making and selling a tie plate of the prior art (*supra*, p. 13) having exactly the same channels in exactly the same location and for exactly the same purposes as shown and described by Wells in his patent No. 203,570.

The Wells patent also shows the other features of the defendants' tie plate, viz., a shoulder D against which the edge of the lower flange of the rail abuts and also a bot-

tom rib E, which is set into the tie. The Wells patent absolutely prohibits any interpretation of the Wolhaupter patents in suit which would make them cover the defendants' tie plate.

The plaintiff's attempt to meet the Wells patent by calling attention to the fact that it shows and describes a "rail chair", which extends over three ties, and not a tie plate, is futile. A rail chair serves the purposes and answers all the requirements of a tie plate; it is placed between the rail and the tie, and it prevents the rail from cutting the tie and from spreading. It is practically a long tie plate. Even if it did not have the entire and exact functions of a tie plate, as it does, its analogy to a tie plate is clear, and this Court has held over and over again that the application of an old device to an analogous use does not constitute patentable invention. A leading case is that of *Penn. R. R. Co.* v. *Locomotive Truck Co.*, 110 U. S. 490, in which this Court said, p. 494:—

> "It is settled by many decisions of this court, which it is unnecessary to quote from or refer to in detail, that the application of an old process or machine to a similar or analogous subject, with no change in the manner of application, and no result substantially distinct in its nature, will not sustain a patent, even if the new form of result has not before been contemplated."

As illustrations of this principle this Court in the *Truck* Case discusses several English cases, among them that of *Harwood* v. *Great Northern Ry. Co.*, 2 B. & S. 194, 222, and 11 H. L. Cas. 654 (our main brief, p. 23), decided in 1865, in which the House of Lords held that *there was no invention in making channels in fish plates* to receive the heads of bolts and to save weight, in view of the well-known use of channel iron for like purposes, and in par-

ticular of the use of such iron under the timbers of a bridge. (Fish plates or "fishes" are the pieces of iron which are placed on opposite sides of the ends of two rails and are bolted together, the bolts passing through the webs of the rails to hold the ends of the rails firmly together.)

This Court (110 U. S. p. 498) quotes with approval the language of Lord Wensleydale in the House of Lords, in the Harwood case: —

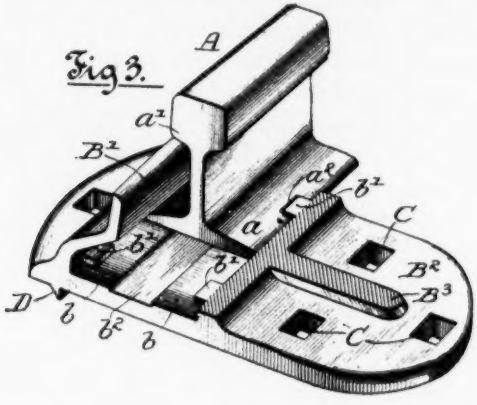
> "The channelled iron was applied in a manner which was notorious, and the application of it to a vertical fish would be no more than the application of a well known contrivance to a purpose exactly analogous or corresponding to the purpose to which it had been previously applied."

The discussion of the Fish Plate Case by this Court is an apt illustration of our proposition here, namely, that the making of channels in the upper surface of a tie plate, as in any other metal work, did not constitute patentable invention when Wolhaupter made his alleged inventions.

In addition to the Wells patent, other prior patents show and describe tie plates similar to defendants' plate and having grooves or channels in their upper surfaces as well as the other features of defendants' plate.

The *Dockstader patent* No. 462,399, November 3, 1891 (Rec. p. 1158), shows and describes a lock rail joint, which performs every function of a tie plate, and has not only a groove in the upper face of its base plate, but also every feature of the defendants' tie plate. It is most clearly shown in Fig. 3, here reproduced.

Fig. 3 of Dockstader Patent.



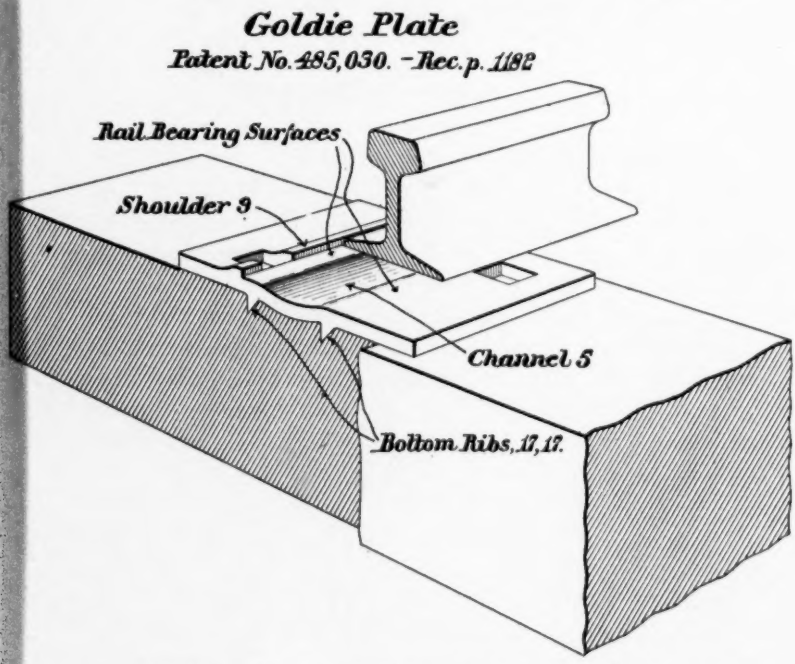
The plate is provided on its bottom with ribs, D, D, and on its top with a shoulder (shown partially cut off in Fig. 3) against which the outer edge of the bottom of the rail bears. The top has a groove b^2 underneath the middle of the rail. It therefore has every feature of the defendants' tie plate, viz., *ribs* on the bottom projecting into the tie, a rail-abutting *shoulder* on the top and a *groove* underneath the rail. If the defendants' tie plate is an infringement of the Wolhaupter patents in suit, those patents are anticipated by this Dockstader device, which has every element of the defendants' tie plate.

The Dunham patent No. 469,386, February 23, 1892 (Rec. p. 1169), shows a tie plate (see our main brief, p. 48) formed of corrugated metal, the corrugations running parallel to the tie and at right angles to the rail. The hollows of these corrugations perform the function of providing receptacles for the sand and grit and of preventing the rail from grinding the sand and grit on the top of the plate, which function the plaintiff alleges is to be attributed to the grooves in the defendants' tie plate. The Q. &

W. Co., the plaintiff's predecessor in title to the Wolhaupter patents in suit, owned this Dunham patent. (Rec. p. 886.)

The plaintiff's praise of *"corrugated top" plates* should be given to this Dunham patent instead of to Wolhaupter, for Dunham anticipated Wolhaupter in this feature.

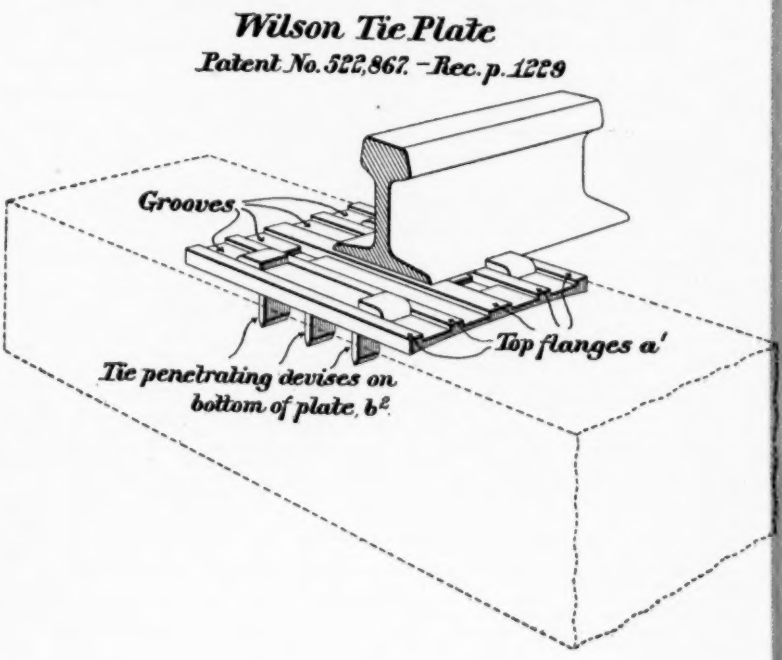
The Goldie patent No. 485,030, October 25, 1892 (Rec. p. 1182), shows a tie plate, illustrated in the accompanying drawing and also at page 36 of our main brief, having a depressed central portion 5 underneath the center of the rail. The tie plate is provided on its bottom with two tie



penetrating ribs 17, 17 and on its top with a shoulder 9 against which the side of the rail abuts. The hollow 5 beneath the rail is shown, as in the patent, of substantial

depth and is undoubtedly deep enough to carry off sand and grit to the same extent as do the grooves in the defendants' tie plate. The Goldie plate has every structural feature of the defendants' plate, and being in the art prior to the Wolhaupter patents in suit absolutely prevents any construction of those patents which would render them infringed by the defendants' plate. The Goldie construction, like that of the first Wolhaupter patent in suit, does not save any weight, however, because the plate is of substantially the same thickness throughout.

The Wilson patent No. 522,867, of July 10, 1894 (Rec. p. 1229), shows a tie plate, illustrated in the accompanying drawing, having flanges a' running parallel to the tie and across the rail, on which flanges the rail rests. Two of



the four grooves thus formed between these flanges contain a special spike device shown separately in Fig. 7 of the patent. The grooves serve the double purpose of saving weight and forming drains for the sand and grit to escape from the top of the flanges a', which support the rail.

The Railroad Gazette, Vol. 24, 1892, p. 221 (Rec. p. 950), reproduced as Defendants' Exhibit B, B, shows a Danish tie plate having a groove in its top beneath the center of the rail and running parallel to the rail.

Eisenbahn-Geleise of 1891 (Rec. pp. 963, 965) shows in Fig. 635 (reproduced as Defendants' Exhibit K. K. K. and illustrated at p. 56 of our main brief) and in Figs. 661 and 662 (reproduced as Defendants' Exhibit L. L. L.) a tie plate and a rail chair, respectively, each having a groove parallel to and underneath the bottom of the rail.

In the Defendants' Exhibit D. D. D., the drawings of which are at page 962, Vol. III, and the text of which is at page 513, Vol. I, both drawings and the text being taken from the "Railroad Gazette", Vol. 19, September 30, 1887, page 630, there is shown and described a tie plate, illustrated at page 53 of our main brief, which was used in Europe, having on its bottom triangular shaped ribs parallel to the rail and across the tie, and having on its top a rail-abutting shoulder and two grooves or depressions under the rail in the same position as the grooves in the defendants' tie plate. Of the grooves the text states:—

> *"The groove shown in the upper surface was apparently to lighten the plate being taken out at a point where the metal was not needed."* (Rec. p. 514.)

Here is the entire substance of the grooves in the defendants' tie plate. In it the metal is taken out from points where it is not needed to lighten the plate, exactly as in the tie plate described in the "Railroad

Gazette" of September 30, 1887, Defendants' Exhibit D. D. D.

All of these devices of the prior art show that it was common and well known before the date of any of Wolhaupter's alleged inventions of the patents in suit to provide one or two channels or grooves along the top of the tie plate, underneath the bottom of the rail, to save weight and to carry off sand and grit.

It therefore could not have required invention for the defendants, or Wolhaupter, or anyone else at the date of the earliest of Wolhaupter's alleged inventions, to have made such grooves to perform such functions in a tie plate of the prior art (*supra,* p. 13), which was already provided on its bottom with cross tie engaging ribs and on its top with the rail-abutting shoulder, exactly as in the defendants' alleged infringing tie plate.

PETERS v. HANSON.

The case of *Peters* v. *Hanson*, 129 U. S. 541, decided in 1889, from which we have cited in our main brief (p. 23), is, we submit, decisive of the point under discussion, and of the case at bar.

In *Peters* v. *Hanson,* the second patent in suit was for a carriage dash-board, and the alleged novel feature was a lower bar channeled on both sides. The purposes of these channels were the same as the purposes for which the channels in the upper surface of the defendants' tie plate were made, viz., to save weight and yet provide an adequately strong device. The claims of the Peters patent are recited on page 549 of the report. As to this patent the court said (p. 553): —

> "As to reissue No. 9891, claims 1, 2 and 3 relate to channeling or recessing the rail or bar, so that the metal on each side of the channel or recess will be

thicker than the metal at the channel or recess, the necessary effect of such arrangement being that the metal on each side of the channel or recess will be thick enough to form a bearing, and the metal in the channel or recess will be capable of being easily perforated. The channelling or recessing of the foot, covered by claim 11, involves the same idea, and the specification states that thereby the foot may be cast of malleable iron, and may be made light and thin, and be better annealed.

"The idea of using iron with channels or recesses in it, to produce any result due to the existence of such channels or recesses, was old in the state of the art of working in metals."

The Court then refers to the testimony of the witnesses who gave instances of the use of channeled iron articles such as "bridges, *railroad iron*, gears of vehicles, jail work, vault work, safes, fire and burglar proof safes, fences, agricultural implements", also of channels in the iron used for "the feet of desks, stoves, machinery of different kinds, vehicles" (p. 554). "The channelling is for the purpose of securing stiffness, lightness, and it is easy to work", and "channeled iron has been used in mechanics wherever it was desirable to combine lightness and strength", and "parties who generally use large lots of it for building, bridge purposes and other purposes, make contracts for large lots of it and have it rolled to order, and get it cheaper that way".

The Court then states (p. 556):—

"This testimony is uncontradicted, and in view of it the improvements covered by claims 1, 2, 3 and 11 of reissue No. 9891, amount only to applications of old devices to new uses, not involving invention."

The situation before the Court in the above case is precisely that presented in the case at bar. It is clear that if there was no invention in channeling iron articles in order to save weight prior to 1881, the date of the application for the Peters patent, surely there could be no invention in channelling the tie plates of the art prior to Wolhaupter, the date of whose first application is 1895.

The principle of *Peters* v. *Hanson*, which is directly applicable and decisive of the case at bar, was applied by the Canadian Exchequer Court to a closely analogous situation in the tie plate art. That Court in *Servis R. R. Tie Plate Co.* v. *Hamilton Steel & Iron Co.*, 8 Canadian Exch. Rep. 381 (our main brief, p. 25), decided in 1904, held a Canadian patent to Servis void for lack of invention for the same reasons which, we urge, are fatal to the plaintiff's contentions here. The Court said:—

> "Prior to Servis' alleged improvements iron or steel plates had been used as tie-plates; and of course it was common knowledge that the insertion of such a plate between an iron or steel rail and a wooden tie would keep the rail from cutting or wearing the wood of the tie, and so in that respect cause the tie to last longer. *It was also a matter of general knowledge that if one wished to reduce the weight of the plate without loss of strength that could be done by using channel iron or angle iron, or, which comes to the same thing, by having the plate made with flanges or ribs.*"

Other cases in which the principle that there could be no invention in cutting or rolling channels or grooves in metal articles to save weight, etc., are cited in our main brief (pp. 24, 25). We ask especial attention to *Harwood* v. *Great Northern Ry. Co.*, 2 B. & S. 194, 11 H. L. C. 654, 667, 684 (July 6, 1865), discussed with approval by this

Court in *Penn. R. R.* v. *Locomotive Truck Co.*, 110 U. S. 490, cited *supra* (p. 21).

We therefore submit that on the facts and on the authorities the defendants had the right to take the tie plates of the prior art having on the top a shoulder parallel to the rail and on the bottom one or more ribs transverse to the tie, and to make in the top surface thereof (as had been done before) channels or grooves to save weight, and the plaintiff's patents, whatever they may be, cannot cover such a tie plate. Whether or not the channels also serve as drains for the sand is entirely immaterial. The defendants had the right to make the channels, whatever function they might perform. But the capacity of the channels to act as drains was well known in the prior art, as stated by the Wells patent No. 203,570. (*Supra,* p. 19, and Rec. p. 1088.)

DEFENDANTS' TIE PLATE IS AN UNPATENTABLE AGGREGATION OF OLD FEATURES.

There is another way of looking at the facts of this case, which leads inevitably to the same result, namely, that the defendants' tie plate is not patentable over the art prior to Wolhaupter, and therefore the Wolhaupter patents cannot cover it; every feature of the defendants' plate was old prior to Wolhaupter, every function of those features was well known and every feature performs its old function in the defendants' plate, exactly as it performed its function in the plates of the prior art. The defendants' tie plate is an unpatentable aggregation of old features, and therefore cannot be covered by the Wolhaupter patents. (It is significant that no one has attempted to patent the specific form of the defendants' tie plate.)

Those features are:

(1) The rail-abutting shoulder on the top,

(2) The transverse tie-engaging ribs on the bottom, and

(3) The channels in the top.

Each one of these features, old by itself and in combination with the others, as abundantly shown by the prior art already discussed, is a separate and distinct feature by itself and performs its own function independently of any of the other features and their functions.

(1) Whether the other features are present or not, the rail-abutting shoulder offers a brace to the rail and prevents shearing of the spikes (old, *supra,* p. 11);

(2) Whether the other features are present or not, the bottom ribs press into the tie and resists lateral movement (old, *supra,* p. 13), and

(3) Whether the other features are present or not, the channels in the top lighten the plate and possibly act as pockets for the sand (old, *supra,* p. 15).

The defendants' tie plate is, therefore, the clearest possible case of an unpatentable aggregation of old features. It has no patentable features, ideas or characteristics over the art existing prior to Wolhaupter, and it could not properly have been patented or monopolized by any patents taken at the dates of the Wolhaupter patents in suit.

CASES ON AGGREGATION.

It is well settled by the decisions of this Court that an aggregation of old features such as are present in the defendants' tie plate does not constitute patentable invention. Therefore the Wolhaupter patents in suit can not cover it.

The leading case of *Hailes* v. *VanWormer*, 20 Wall. 353, is decisive on this point. In that case the patent in suit was for a base-burning or self-feeding stove involving the combination of a flaring fire-pot supported by a base, a coal reservoir located over the fire-pot and having its lower end contracted, revertible flues outside of the pot to conduct the products of combustion downwards to the base

of the stove and a direct draft obtained by a flue passing out above the fire-pot and provided with damper openings in the exterior of the stove with mica inserted therein. It was the combination of these elements which was alleged to constitute the infringement.

As to the defendants' stove, the court said (p. 372) : —

> ". . . The devices used by the defendants produce no new effects, because used in combination. The space around the fire-pot leading to the base doubtless secures the beneficial results long known to follow the use of revertible flues. It may be conceded to be an equivalent for such flues. But the results of its construction are not changed by the fact that a flaring fire-pot, and a supply reservoir with a contracted discharge end, and openings for illumination are used in the same stove. It still operates to conduct the products of combustion to the base, and into the exit flue. No new operation is given to it by the combination. The same may be said of every other device employed by the defendants which is also in the complainant's combination. Each produces its appropriate effect unchanged by the others. That effect has no relation to the combination; in no sense can it be called its product. Thus far nothing novel is produced. This, then, is mere aggregation of devices, not invention, and consequently the use of those devices, either singly or together, cannot be held to be any infringement of rights belonging to the complainants."

As to the second claim, which covered a combination in a base-burning stove of a reservoir with a contracted discharge end, an expanded fire-pot and the downward extending flues, the court said, page 373 : —

". . . it is very evident that the combination of the three devices named is not the work of invention. They have no relation to each other. Neither the form of the feeder, nor the shape of the fire-pot bears at all upon the direction of the draft passages. There is no novel result flowing from the joint operation of the three devices. The revertible flues have no more to do with a stove supplied by a feeder than they would have with a stove supplied by hand. There is, therefore, nothing in this claim that interferes with what the defendants have done."

As to the general law of combinations and aggregations the court states, page 368: —

"It must be conceded that a new combination, if it produces new and useful results, is patentable, though all the constituents of the combination were well known and in common use before the combination was made. But the results must be a product of the combination, and not a mere aggregate of several results each the complete product of one of the combined elements. Combined results are not necessarily a novel result, nor are they an old result obtained in a new and improved manner. Merely bringing old devices into juxtaposition and there allowing each to work out its own effect without the production of something novel, is not invention. No one by bringing together several old devices without producing a new and useful result the joint product of the elements of the combination and something more than an aggregate of old results, can acquire a right to prevent others from using the same devices, either singly or in other combinations, or, even if a new and useful result is obtained, can prevent others from using some of the devices, omitting others, in combination."

This case is directly in point and conclusive of the case at bar. The features of the stove there involved were "aggregated" in the patented stove in precisely the same way as are the features of the defendants' tie plate aggregated or brought together in that plate. Each feature performs its old function in its own way, and the joint product is nothing more than an aggregate of the old results. There is no co-operation between the various elements.

The principle of the case of *Hailes* v. *Van Wormer* has been applied by this and other courts in innumerable cases, many of which are cited in our main brief (pp. 28–31).

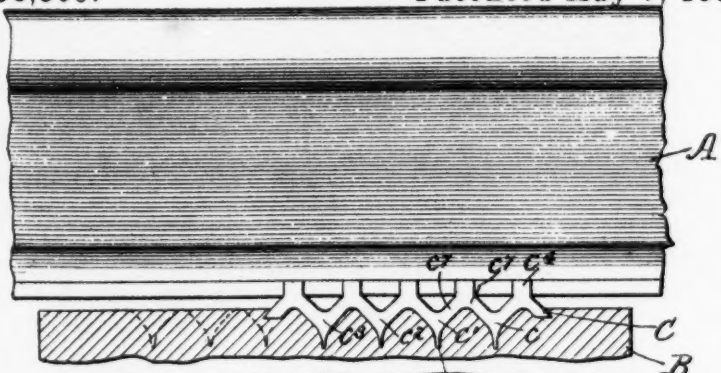
For these reasons we submit that the defendants' tie plate had no feature, idea or characteristic that was patentable over the tie plates of the art prior to Wolhaupter, and that therefore the Wolhaupter patents cannot cover the defendants' tie plate. This should be an end of the plaintiff's case and a detailed discussion of the Wolhaupter patents, the validity of their claims, and the issue of infringement should be superfluous. For the sake of completeness, however, we shall proceed to discuss these matters. It will appear that under the established rules of interpretation laid down by this and other courts the defendants' tie plate does not infringe any of the Wolhaupter patents and that those patents are each and all invalid if construed to cover defendants' structure, which could infringe no valid patents of their dates.

B. WOLHAUPTER.

TIE PLATE.

No. 538,809. Patented May 7, 1895.

Fig. 2.



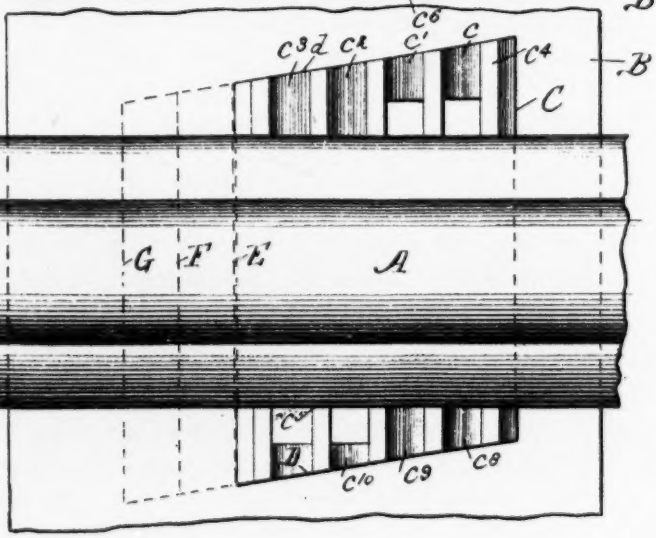
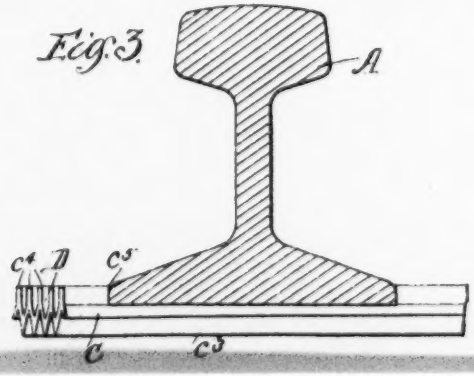


Fig. 1.

Fig. 3.



THE FIRST WOLHAUPTER PATENT IN SUIT, No. 538,809.

The tie plates which we have been discussing, including the defendants' plate, are primarily of a single type, viz., a flat plate with the additional features of a rail-engaging shoulder and weight-saving channels or grooves on its upper surface and V-shaped across-the-tie ribs on its bottom. The shoulder, channels and ribs are parallel to the rail and transverse to the grain of the tie.

The tie plate of the first Wolhaupter patent in suit (Rec. p. 11) is of an entirely different type. It is a plate made up of a series of angular arches, which at their upper meeting points form ridges on which the bottom of the rail rests and at their lower points of meeting form sharp, deep bottom *flanges* c^6, which enter deeply into the tie, *parallel and not at right angles to its length*, and attach the plate to the tie. On each side of the rail the upper ridges of the plate are provided with short flanges c^4, against which the side of the lower flange of the rail abuts. The rail does not rest *upon* but *against* these flanges. The rail rests upon the tops of the series of arches.

The main characteristic of this plate of the first Wolhaupter patent is that the flanges on the top and on the bottom (which bottom flanges are driven into and *attach* the plate to the tie) are *parallel to the tie and crosswise to the rail.* This characteristic alone places it in a class entirely distinct from that of the defendants' plate and its prototypes of the prior art in which there are bottom ribs, not flanges, at right angles to the tie.

The Wolhaupter patent points out that tie plates like those of the patent, having bottom flanges at right angles to the rail and running lengthwise of the tie, are forced lengthwise of the tie by the rail, and the alleged invention is directed to dealing with this difficulty (which the patent

says was inherent in tie plates of this character), not by providing any means to prevent the spreading movement of the plate and rail, but by so constructing the plate on its under side —

> "that after it has been moved by the lateral pressure of the rail, it, together with the rail, can be easily moved back to the proper position to maintain the gage and be held in that position even more firmly than when originally laid." (Page 1, lines 54–89.)

This construction consists in making the bottom flanges of such length that one after the other they extend from the outside of the rail increasing distances; that is, the second flange c^1 extends beyond the first flange c, the third c^2 beyond the second, etc. Then when the rail and plate have moved outward or laterally, thus lengthening the grooves worn by the flanges, the plate can be taken up and moved sidewise across the tie, and at the same time it and the rail are brought back to their original positions lengthwise of the tie. This is accomplished by placing the second flange c^1 in the indentation previously occupied and worn in the tie by the first flange c, the third flange c^2 in that worn by the second flange c^1, etc.

This feature of the plate of the first Wolhaupter patent in suit is described in that patent as follows: —

> "The operation is as follows: The plate is of course originally engaged to the tie in such a location as that the rail will be in proper position to form the proper gage of track. Each of the flanges c to c^2 will displace enough of the fiber to allow them to enter the face of the tie. After the plate has been in use some time the lateral pressure of the rail will move the plate to a greater or less extent along the length of the tie and the ends d of each flange c to c^2 will compress the fiber in advance of it. Now if the

plate is removed there will be a series of indentations or perforations in the face of the tie made by the flanges c to c^3 and these indentations or perforations will be stepped or on a diagonal line. The plate is now replaced on the tie with the edge E moved to a position shown by dotted lines F. This will bring each flange c to c^3 into the indentation or perforation originally occupied by the flange next adjacent with the exception of the flange c^3 nearest the edge E, this flange making a new indentation for itself. Now if the end d of each flange c to c^3 is brought to a bearing against the indentation made by the next preceding flange and the ends of these flanges are on a diagonal line as compared to the rail flange, the plate will be found to have moved lengthwise of the tie a distance equal to the difference between the length of each plate flange measured from its end to the rail flange. Now as will be seen this movement of the plate lengthwise of the tie will force the rail laterally a corresponding distance, thus restoring the desired gage of the track. If one shifting of the plate is not sufficient to take up the abnormal width of the gage, or if after the plate has been shifted, it again gives way to sufficiently widen the gage the edge E can be shifted to the position shown by the dotted lines G." (Page 2, lines 46–86.)

The defendants' plate has no such organization or capacity as that thus described in the first Wolhaupter patent in suit.

While the 8th claim of the patent, the claim in issue, does not in terms refer to this, the most marked feature of the plate of the first Wolhaupter patent, that feature is of controlling importance in this case, for in considering the patent it must be remembered that the tie plate of the first Wolhaupter patent has this capacity *because its bottom*

flanges are parallel to the tie. It is with such plates only that Wolhaupter was dealing. The fundamental defect which he is trying to cure exists only in a plate which has bottom flanges parallel with the tie for it is such a plate only that is liable to be moved lengthwise of the tie, i. e., laterally of the rail, by the side push on the rail. This permits the fatal "spreading" of the rail which is the cause of many accidents.

Therefore such a plate, viz., one with the flanges on the bottom made at right angles to the rail and lengthwise of the tie, is the *only plate* referred to by Wolhaupter in his specification and claims. His patent is limited to improvements in that form of plate.

The defendants have no such plate. Their tie plate has ribs on the bottom that run crosswise of the tie, and consequently belongs to a class of plates entirely distinct from that of the plate of the first Wolhaupter patent in suit.

DISTINGUISHING DIFFERENCE BETWEEN PLATES WITH PARALLEL-TO-THE-TIE FLANGES AND PLATES WITH ACROSS-THE-TIE-RIBS ADMITTED BY WOLHAUPTER.

Wolhaupter himself in his prior patent, No. 530,738, December 11, 1894 (Rec. p. 1244), states that a plate of the type of the first Wolhaupter patent in suit, having bottom *flanges* parallel to the tie and thereby permitting the lateral "spreading" of the plate and rail, belongs to an entirely different class of tie plate from that of the defendants' tie plate and the tie plates of the prior art, which have bottom *ribs* running across the tie.

In patent No. 530,731, Wolhaupter says (p. 1, line 39) :—

> "Heretofore in the manufacture of this class of plate *two broad styles* or forms of plates have been manufactured, namely: those wherein the *ridges or*

engaging devices on the under side of the plate are adapted to enter the tie *parallel with the grain of the tie* and not to cut the fiber, but merely to separate it on the line of the grain thereof."

(This is the class to which the plates of the Wolhaupter patents in suit belong and to which also belongs the prior Servis plate illustrated at page 85 of the Record and shown and described in the Servis patent No. 294,816, March 11, 1884, Rec. p. 1102.)

We continue the quotation from the Wolhaupter patent No. 530,738 (Rec. p. 1246, line 46) : —

"and secondly, those in which the engaging devices whereby the plate is engaged to the tie were so arranged as to extend *transversely of the grain of the fiber* and thus cut into and sever the fiber".

(This type of plate is that of the defendants' plate and of the Wells, the prior Goldie and C. A. C. or Churchward plates referred to above, pp. 12–14.)

Wolhaupter continues (p. 1, lines 51) : —

"These two forms are clearly distinct from each other, since each proceeds on an entirely different theory."

He explains those theories as follows (p. 1, line 53) : —

"Those plates in which the engaging devices are parallel with the grain of the tie [Wolhaupter and Servis] are manufactured on the theory that it is unadvisable to cut the grain of tie since the tie is thereby weakened, and the grain being cut transversely the moisture is permitted to enter the fiber and thus rot it, while those who prefer the second class [that of the defendants' tie plate and its prototypes, the Wells, Goldie, C. A. C., etc.] assert that the cutting of the

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> fiber is a secondary consideration when the fact that *the plate is prevented absolutely from creeping along the tie and thus widening the gage of the road is considered.*"

Here again, as in the first patent in suit, Wolhaupter points out that it was understood in the art that bottom *flanges* parallel with the grain of the tie, which are characteristic of the plates of the patents in suit, do not prevent the plate and rail from spreading, while *ribs* across the tie do prevent it.

Wolhaupter states the advantages of the cross ribs of the other class, to which defendants' plate belongs, saying (p. 1, line 65):—

> "or in other words, the advocates of the transverse engaging devices [such as those of the defendants' plate and its prototypes] that is, those that cut into the grain at right angles or substantially right angles to the grain, base their argument upon the ground that *the plate forms a positive and absolute stop against lateral movement by the rail without depending on the spikes to prevent it*".

We have therefore the statement of Wolhaupter, the patentee of the patents in suit:—

(1) That the plates with bottom *flanges* parallel to the tie, such as are shown in the three patents in suit, were likely to move lengthwise of the tie and permit the rail to spread;

(2) *that such plates belong to an entirely distinct class from those provided with cross bottom ribs, such as the defendants' plate and its prototypes*, and further

(3) that *the principal object of the invention* of Wolhaupter's first patent in suit was to construct his plate so that after having

"been moved by the lateral pressure of the rail" [Wolhaupter's first patent in suit, Rec. p. 12, line 54],

it could be taken up, shifted sidewise and restored to its original position lengthwise of the tie, thereby bringing the rail back to its proper place.

Defendants' alleged infringing tie plate concededly has none of these features. It has not any bottom *flanges* at all, such flanges being thin, deep, sharp, parallel-to-the-tie projections, which *attach* the plate to the tie but do not prevent it from "spreading". It merely has the across-the-tie *ribs* of the prior art as exemplified in the prior Goldie and C. A. C. plates, which ribs are V-shaped and shallow and not sharpened and do not attach the plate to the tie, but do positively prevent it from "spreading". These across-the-tie ribs are not Wolhaupter's bottom *flanges* either in construction, function or in result, and place the defendants' plate, as Wolhaupter himself points out, in an entirely different class from that of the plates of the Wolhaupter patents in suit and outside of the alleged inventions and scope of those patents.

THE ANTI-BUCKLING FUNCTION OF WOLHAUPTER'S FLANGES NOT PRESENT IN DEFENDANTS' PLATE.

A second and characteristic function of the top and bottom across-the-rail flanges of the plate of Wolhaupter's first patent in suit is, as stated in the patent, to give the plate increased resistance to the buckling strains which tend to bend the plate at the edges of the rail parallel thereto. In so arranging his flanges to resist buckling Wolhaupter proceeded on the well-known principle that a corrugated or angled plate is more difficult to bend or buckle than a flat plate. The first Wolhaupter patent in suit states (Rec. p. 12):—

"The invention further contemplates a form of plate provided with top and under flanges which shall be extremely strong in its construction and effective in its designed use." . . . (Page 1, lines 60–64.)

"It will be observed that by the form of plate there is much less opportunity or chance of buckling than with the ordinary flat plate since each point where the rail rests upon the plate is supported and trussed by *metal which is more or less on edge* instead of on its side, thereby forming for each resting point of the rail two girders c^3 joined at the apex by the top flanges c^4 where the rail rests." (Page 1, lines 92–101.)

Wolhaupter's flanges, running across the rail to resist the buckling or bending of the plate, are characteristic features, which the defendants' plate entirely lacks. In that plate the shoulder, the grooves, the rail bearing surfaces and the bottom V-shaped ribs all run parallel to the rail, and they therefore have no tendency whatever to prevent the plate from buckling, because the bending strain comes at the edges of the bottom of the rail and is parallel to the shoulder, grooves and ribs of the tie plate.

The difference between this anti-buckling function of the flanges of the Wolhaupter patents in suit running crosswise of the rail, and the lack of that function in the shoulder, grooves and bottom ribs of the defendants' tie plate running parallel to the rail can be easily appreciated by taking a piece of corrugated paper and trying to bend it across, that is, at right angles to the corrugations. The corrugations then resist the bending strain as do the flanges of the Wolhaupter plate of the first patent in suit. An attempt to bend the piece of corrugated paper parallel to the corrugations will be assisted rather than resisted by the corrugations.

The defendants' tie plate has no flanges running across

the rail, which is the only arrangement of flanges which can resist the buckling strain of the rail. The defendants' tie plate depends upon *the thickness of the metal of the plate itself* at the edges of the rail to prevent buckling. (Storey, Rec. p. 314, Q. 48.) This is precisely the opposite of the "mode of operation" of the plate of Wolhaupter's first patent in suit, which is that of resisting the buckling strain by means of across-the-rail corrugations as in the case of the tie plate of the prior Dunham patent illustrated in our main brief, page 48. (Rec. p. 1169.)

CLAIM 8 OF WOLHAUPTER'S FIRST PATENT IN SUIT NOT INFRINGED.

The claim in issue of this first Wolhaupter patent is as follows (Rec. p. 14):—

> "8. A railway tie plate formed on the under side with devices more or less sharpened adapted to penetrate and engage the tie, and on its upper side with a series of flanges on which the rail rests, substantially as described."

This claim specifies a tie plate with two characteristics:

(1) "Devices" on the bottom "more or less sharpened adapted to penetrate and engage the tie". These are the flanges c^5, which run *parallel* to the tie and are more or less *sharpened* to penetrate and engage the tie. See figures of patent (*supra*, p. 35).

(2) "A series of flanges" on the upper side of the plate "on which the rail rests". The *flanges* on top of the plate are specifically the short flanges c^4 against which the rail rests or abuts but on which the rail is not mounted. The rail is mounted on the ridges c^3, which it is inaccurate to call "flanges".

The defendants' plate has neither of these features.

(1) It does not have the "devices more or less sharp-

ened adapted to penetrate and engage the tie" on the bottom of the plate, the function of which is to *secure* the plate to the tie, as plaintiff's practical expert Wallace admits. (Rec. p. 577, X-Q. 175.) The two ribs on the bottom of the defendants' plate are not "sharpened" either "more or less", but are blunt-pointed V shaped ribs exactly like the ribs of the old Goldie commercial plates, which the witnesses agree were not sharpened and did not penetrate the tie in the sense that Wolhaupter's bottom flanges, which are *sharpened*, penetrate the tie and thereby attach the plate to the tie.

Wolhaupter testified (Rec. p. 194):—

> "*X-Q.* 240. How do these flanges on the bottom of 'Complainant's Exhibit No. 15' [the alleged infringing tie plate] compare with the flanges on the bottom of the Goldie type of tie-plate in regard to shape, size and situation relative to the rail?
>
> "*A. They are much the same in size and shape* but my recollection is that they were considerably closer together and more nearer the center of the rail than as shown on this plate 'Exhibit 15'".

That is, the ribs or flanges on the bottoms of the Goldie plates (*supra*, p. 24) were practically of the same size and shape as those on the bottoms of the defendants' alleged infringing plates.

Of the across-the-tie ribs on the bottoms of the Goldie plates Wolhaupter testified in answer to X-Q. 226 (p. 192):

> "*A.* They were wedge shaped *but hardly could be called sharpened*, they were really of triangular shape but of a form I should say like an equilateral triangle."

In answer to X-Q. 230 he testified (Rec. p. 193):—

> "*A. These flanges were not sharp enough to cut the*

> *fibre* but merely depressed it and then abraded it and by such abrasion formed pockets for themselves on the top surface of the tie, and *the plate in no sense became part and parcel of the tie as the Wolhaupter and Servis plates* of which we have been talking."

In answer to X-Q. 233 he said (Rec. p. 193): —

> "*A.* As explained above these flanges were so small with such a rough edge and dull edge that they rather abraded the wood and cut or ground a way for themselves into the tie."

The defendants' bottom ribs, which are exactly those of the 1892 Goldie plates, therefore do not perform the functions and are not the equivalent of Wolhaupter's bottom flanges, concerning which the *plaintiff's* expert Miller said (Rec. p. 645): —

> "The projecting devices on the bottom of the plate, more or less sharpened, perform the function of and provide additional means for *attaching* the plate to the tie, and being more or less sharpened they readily penetrate the tie by the weight of the traffic."

The defendants' bottom ribs perform no such function.

On the other hand the defendants' bottom ribs perform the function of completely preventing the lateral movement of the plate and rail, which is not and cannot be performed by the Wolhaupter plate.

Faulkner, manager of the tie and timber department of the Atchison Railway System, testified (p. 285): —

> "I believe when the ribs run across the grain parallel with the rail that they hold the track in gauge better than when they run the other way."

The first Wolhaupter patent in suit No. 538,809 (Rec. p. 11), and the prior Wolhaupter patent No. 530,738 (Rec. p. 1244) admit that Wolhaupter's bottom *flanges* will not, and that across-the-tie *ribs* like defendants' will, positively prevent the plate and the rail from spreading (*supra*, pp. 36, 39).

The defendants' bottom ribs, therefore, are not the same as, or the equivalent for, the bottom flanges of the plate of the Wolhaupter first patent in suit. They do not attach the plate to the tie. They do not penetrate the tie but merely abrade grooves in it. They are not "more or less sharpened", as required by the eighth claim of the first Wolhaupter patent in suit. But they positively prevent the plate and the rail from spreading by an entirely different mode of operation, namely, the cross grip of the bottom ribs against the grain of the tie. Therefore the defendants' tie plate does not embody that element of claim 8 of the first Wolhaupter patent in suit, which is specified as "devices more or less *sharpened* adapted to *penetrate* and engage the tie."

If, regardless of the fact that defendants' bottom ribs do not perform the functions of Wolhaupter's sharpened flanges, they may be said to be "sharpened" as a matter of words, it follows that every bottom projection may likewise be called "sharpened", as defendants' expert Carter points out (Rec. pp. 351–358), and that element of Wolhaupter's claim becomes absolutely meaningless.

In other words, the "railway tie plate" of the claim must be one to which the alleged improvements set out in the patent are applicable and in connection with which they can be realized. The Wolhaupter improvements of the first patent in suit are applicable to and can be realized only in a tie plate in which the top and bottom flanges are *parallel* to the tie and at right angles to the rail. Claim 8, therefore, must be limited to this form of tie

plate and cannot be construed so as to cover defendants' tie plate in which exactly the reverse arrangement is employed, to which none of the Wolhaupter alleged improvements can possibly be applied, and which does not perform the functions of those improvements.

In the patent law a thing is not the same as or the equivalent of another, and a defendants' device is not an infringement of a patent unless it performs the same functions in substantially the same way.

AUTHORITIES THAT A DEVICE THAT DOES NOT PERFORM THE FUNCTIONS OF THAT OF THE PATENT IS NOT AN INFRINGEMENT.

In *Machine Co.* v. *Murphy*, 97 U. S. 120, this Court stated the law (p. 125) : —

> " Except where form is of the essence of the invention, it has but little weight in the decision of such an issue, the correct rule being that, in determining the question of infringement, the court or jury, as the case may be, are not to judge about similarities or differences by the names of things, but are to look at the machines or their several devices or elements in the light of what they do, or what office or function they perform, and how they perform it, and to find that one thing is substantially the same as another, if it performs substantially the same function in substantially the same way to obtain the same result, always bearing in mind that devices in a patented machine are different in the sense of the patent law when they perform different functions or in a difierent way, or produce substantially a different result."

In *Bates* v. *Coe*, 98 U. S. 31, this Court said (p. 42) : —

> " Devices in one machine may be called by the same name as those contained in another, and yet

they may be quite unlike, in the sense of the patent law, in a case where those in one of the machines perform different functions from those in the other. In determining about similarities and differences, courts of justice are not governed merely by the names of things; but they look at the machines and their devices in the light of what they do, or what office or function they perform, and how they perform it, and find that a thing is substantially the same as another, if it performs substantially the same function or office in substantially the same way to obtain substantially the same result; and that devices are substantially different when they perform different duties in a substantially different way, or produce substantially a different result."

In *Thomson-Houston El. Co.* v. *Western El. Co.*, 72 Fed. 530, the Court of Appeals for the Seventh Circuit said (p. 531):—

"In determining whether the invention described in one patent differs from that described in another, evidence may be heard — and, in a difficult case, manifestly ought to be heard — concerning the construction and actual operation of each. *Specifications and claims are necessary, but inventions consist in things, not in words.*"

There are many other cases in which this established principle of patent law has been stated, which are unnecessary to refer to.

DEFENDANTS' PLATE HAS NO "SERIES OF FLANGES ON WHICH THE RAIL RESTS" AS SPECIFIED IN CLAIM 8 OF THE FIRST WOLHAUPTER PATENT IN SUIT.

Claim 8 of the first Wolhaupter patent in suit specifies that the plate is formed "on its upper side with a *series of flanges* on which the rail rests".

As we have pointed out, there are in fact no *flanges* on the top of the Wolhaupter plate of the first patent in suit on which the rail rests. The only top flanges of the patent are the parts marked "c^4" against which the rail abuts. The ridges marked "c^7" between the hollows are not flanges. The claim does not read correctly upon the plate described and shown in the specification.

"A series of flanges" c^4, against which the rail rests or abuts, has no counterpart in the defendants' tie plate. In that plate the rail abuts against a continuous shoulder, as in the prior art plates (*supra*, p. 13), and not against a "series of flanges". For this reason the defendants' tie plate has no "series of flanges on the upper surface of the plate", which corresponds in function and mode of operation to the series of flanges specified in Wolhaupter's claim 8.

However, if the specification and drawings of the Wolhaupter patent be ignored, and plaintiff's contention be accepted that the "series of flanges" referred to in the claim are the tops of the arches c^7, on which the rail rests, it is clear that even with this forced construction of the claim the defendants' tie plate does not have such "flanges".

These supposed "flanges" of the Wolhaupter plate run across the rail at right angles to it, and they therefore perform the function of resisting the buckling of the plate, as the patent states (*supra*, p. 41). In the defendants' tie plate, on the contrary, the rail-bearing surfaces,

which the plaintiff calls "flanges", are not flanges at all but merely wide portions of the upper surface of the plate, separated by shallow weight-saving channels which run parallel to the rail. They are the real main body of the plate. *In no sense are they made up of "metal more or less in upright position"* as the Wolhaupter patent (Rec. p. 13) describes the "flanges" of that patent (specification, p. 2, line, 17); they are the bearing parts of the top surface of the defendants' plate. The fact that they are separated by broad, shallow channels does not make them "flanges" or ridges, or give them any resemblance in function, or in other respects to the differently arranged so-called "flanges" of the plate of the first Wolhaupter patent in suit, which resist the buckling strain of the rail because they run across the rail, as we have pointed out. These rail-supporting parts of the defendants' tie plate do not perform the functions of the flanges of the plate of the first Wolhaupter patent in suit, and therefore are not the same as or the equivalent of the supposed cross-rail "flanges" of the tie plate of the Wolhaupter first patent in suit as the authorities cited (*supra*, p. 47) show.

The plaintiff contends that the rail-supporting surfaces of the defendants' plate should be regarded as "flanges", because it says that the broad, shallow, weight-saving channels of defendants' plate, which plaintiff says have some function as receptacles for the sand and grit that might collect on the rail-supporting surfaces of the plate, necessarily involve raised portions, one on each side of each channel, as a valley involves hills.

We believe that this Court will find that this supposed function of the grooves is not of the least consequence (Storey, Rec. p. 318, Q. 84), and that its alleged merits have been grossly exaggerated by the plaintiff in an effort to attribute some advantage to what it has been pleased to call "a corrugated tie plate". There is no evidence that a single tie plate of *the millions in use without such grooves*

has ever been removed because it was actually worn by the abrasion of the sand on its rail-supporting surface. Plaintiff's witness Wallace admits that the "rate of abrasion is slow" and that the Sacramento, a flat top plate, "if made a little thicker would last indefinitely". (Rec. p. 575, X-Q. 149.)

Even if this drainage function of the grooves were a matter of any importance, that would not aid the plaintiff, because the grooves, such as the defendants employ, were taken with their function specifically from the Wells patent No. 203,570 (Rec. p. 1088), and other patents and devices of the art prior to Wolhaupter, as above pointed out (*supra*, p. 18), and not from the tie plate of the first Wolhaupter patent in suit. Grooves as receptacles for sand as well as to save material and weight were not a novel feature with Wolhaupter.

We therefore submit that the defendants' tie plate has neither of the features which are characteristic of the tie plate specified in claim 8 of the Wolhaupter patent in suit, No. 538,809. It has not the "devices more or less sharpened adapted to penetrate and engage the tie" on the under surface of the plate. It has not "a series of flanges on which the rail rests" on the upper surface of the plate, and its tie plate is not "substantially as described" in the specification and drawings of the Wolhaupter patent.

It is therefore not an infringement.

INFRINGEMENT OF CLAIM 8 OF THE FIRST WOLHAUPTER PATENT IN SUIT FORBIDDEN BY THE PRIOR ART.

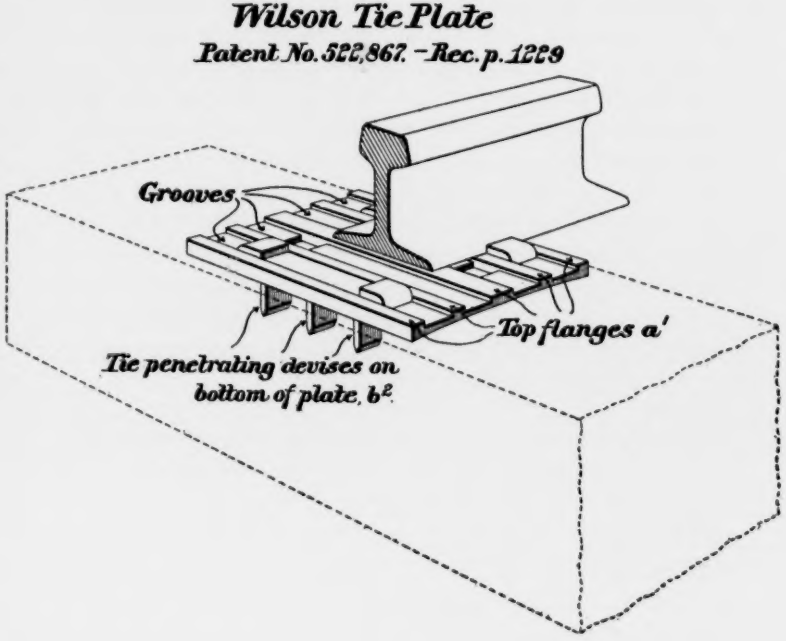
The plaintiff in order to read claim 8 of the first Wolhaupter patent in suit on the defendants' tie plate is obliged to disregard what is shown and described in the specification and drawings of that patent and to overlook differences of the greatest significance between the tie plate of

that patent and the defendants' tie plate. Such a broad and vague construction of Wolhaupter's claim is not permissible.

If the claim is to be so construed it is, we submit, readable much more exactly on the tie plates of the prior art than it is upon the defendants' tie plate.

In this connection we need consider but three prior patents, viz., that to Wilson, No. 522,867, July 10, 1894; that to Goldie, No. 485,030, October 25, 1892, and that to Dockstader, No. 462,399, November 3, 1891.

The Wilson patent (Rec. p. 1229) describes a tie plate A, *which on its upper surface has five across-the-rail flanges a'*, as well shown in Figs. 1 and 3, whereby *four grooves* are



formed between the flanges on the top surface of the plate. *The rail rests on top of these flanges.* The flanges a^1, moreover, as in the Wolhaupter patent, run crosswise of the rail, and thereby perform the same function, as in the plate of the Wolhaupter patent, of resisting the buckling strain of the rail upon the plate. Of this the Wilson patent states: —

> "The plate A is formed . . . with longitudinal ribs on its upper surface *to prevent buckling* of the plate under the weight of the rail and passing trains, and these may consist of a series of narrow ribs a^1 of substantially equal width." (Wilson, p. 1, lines 36–41.)

The grooves, as in the Wolhaupter patent, would likewise perform the function of receptacles for sand and grit.

The Wilson patent shows in two of the grooves in the top of the plate "guard devices" B which are strips having rail abutting heads on their tops and spikes b^2 on their bottoms, which spikes b^2 pass through holes a^4 in the plate and thereby attach the plate to the tie.

It is immaterial that the Wilson plate A and guard devices B are made in separate pieces. When the plate is in place they are united and form one structure. It could not amount to invention to unite these devices or make them all in one piece.

The Wilson plate combines every feature specified in claim 8 of the first Wolhaupter patent in suit. It is "a railway tie plate formed on the under side with devices more or less sharpened adapted to penetrate and engage the tie". These are the spikes b^2. It is formed "on its upper side with a series of flanges on which the rail rests". These are the flanges a^1. The Wilson plate is more nearly "substantially as described" in the Wolhaupter patent than is the defendants' tie plate for Wilson's upper flanges and grooves are parallel to the tie and at right angles to the

rail as in Wolhaupter's plate which is not true of the defendants' plate.

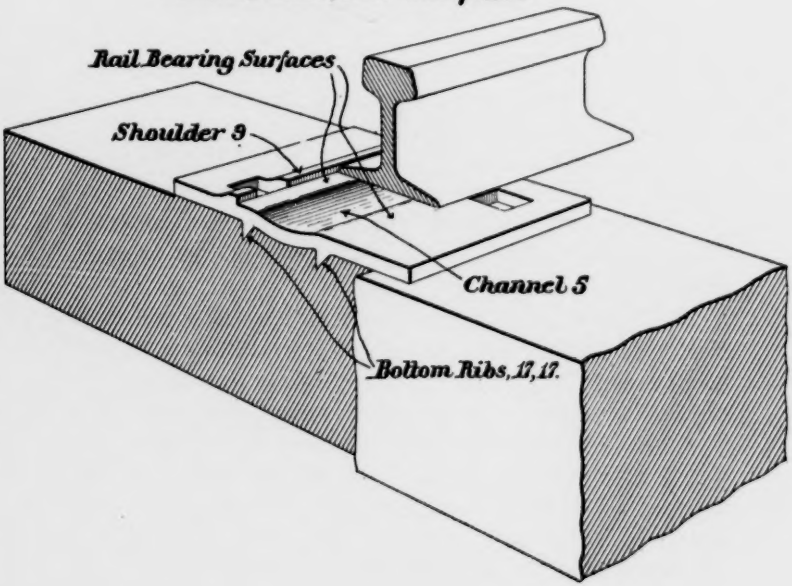
We submit that if the Wolhaupter claim should be so broadly and loosely construed as to cover the defendants' tie plate, it is likewise readable upon the Wilson plate and is therefore anticipated and invalid.

The Goldie patent No. 485,030 (Rec. p. 1182) likewise shows and describes a tie plate which anticipates claim 8 of the first Wolhaupter patent in suit if that claim is so broadly construed as to be infringed by the defendants' tie plate.

The plate of the Goldie patent has on its under surface "devices more or less sharpened adapted to penetrate and

Goldie Plate

Patent No. 485,030. – Rec. p. 1182



engage the tie", if that description is applicable to *ribs* across the tie. They are the ribs 17, 17 parallel to the rail as are the defendants' ribs, and, as shown in the Goldie patent, they are more nearly "sharpened" than are the corresponding ribs of the defendants' tie plate.

The Goldie plate on its upper side has two rail-supporting surfaces 7, 7, which are just as much "a series of flanges on which the rail rests", as are the corresponding upper surfaces of the defendants' tie plate. Between these rail-supporting surfaces or "flanges" is a distinct depressed portion 4 forming a transverse groove 5 on the upper side of the tie plate, which would act as a receptacle for sand to the same extent as would the grooves in the defendants' tie plate. Of this feature the Goldie patent states:—

> "3 is a tie plate having a depressed central portion 4 beneath the rail and provided with a transverse concavity or depression 5 on its upper side." (P. 1, lines 72–76.)

Goldie plates (sometimes called Glendon plates), exactly as described in this patent, were manufactured in substantial quantities in 1892, and thereabouts, and went into successful commercial use. (Bell, p. 115; Faulkner, p. 204, Q. 42; p. 205, Q. 51, 57; Dyer, p. 434, Q. 12–15; Zimmerman, p. 530; Evans, p. 538, Q. 21; Ambler, p. 542; Cullen, p. 547; Goldie, p. 794, Q. 6; Schleiter, p. 819, Q. 36.) See our main brief (p. 58).

The groove or concavity in these Goldie plates was about one-eighth of an inch deep, as Ambler, who had charge of the rolling of these plates at the mill of Dilworth, Porter & Company, testified. (Rec. p. 542, Q. 13.)

Dyer, while in the employ of the Atchison, Topeka & Santa Fe Railroad, was division superintendent of the division extending between El Paso, Texas, and Deming, New

Mexico. He installed about one thousand of these Goldie plates at --

> "say eight or ten miles west of Las Vegas, New Mexico, where we had trouble in holding our track to gauge on curves". (Rec. p. 434, Q. 12.)

The plates had —

> "a concave space through the center". (Rec. p. 434, Q. 13.)

He testified that this was —

> *"a space for sand and dirt to roll out from under the rail"*. (Rec. p. 435, Q. 15.)

He testified that the plates —

> "were considered very satisfactory and I didn't perceive any evidence of spreading". (Rec. p. 435, Q. 27.)

It is impossible to doubt that the groove or cavity in the Goldie 1892 cross rib plates was just as much a receptacle for sand which might collect on the rail-bearing surfaces or "flanges" of that plate as are the grooves in the defendants' alleged infringing tie plate.

The plaintiff's contention that the cavity or groove in the top of the Goldie tie plate would not be effective as a sand receptacle because many years ago rails were made with round bottoms which would partially occupy the cavity in the top surface of the Goldie plate; is absolutely unfounded. (See Dyer's testimony above quoted.)

Mr. Wallace, the plaintiff's witness, admits that "since some time in the 80's" rails "have had flat bottoms" (Rec. p. 577, X-Q. 171), so that in 1892 the cavity in the top of the Goldie plates would not have been even partially filled by the rail.

Goldie, also called by the plaintiff, admitted (Rec. p. 805) : —

> "*X-Q.* 99. But when the plate and rail in this device were in track, it was intended to be, and there was, a space between the bottom of the rail and the bottom of the cavity ?
>
> *A. That is correct.*
>
> *X-Q.* 100. And this shows both in the drawings and the plates as manufactured, of this kind ?
>
> *A.* It does."

He further admitted that at the time the Goldie top-cavity bottom-rib plate was designed and manufactured, that is, in 1892, some of the rails used by railroads were practically flat on the bottom and any convexity of the rails at that time was certainly not as great as the depth of the cavity employed in the Goldie plate. (Rec. p. 814, RX-Q. 181 to RX-Q. 183.)

The Goldie patent No. 485,030 (Rec. p. 1182) and the commercial manufacture and practical use of the Goldie plates, all being prior to the first Wolhaupter patent in suit, prohibit any construction of claim 8 of that patent which would read it upon the defendants' tie plate.

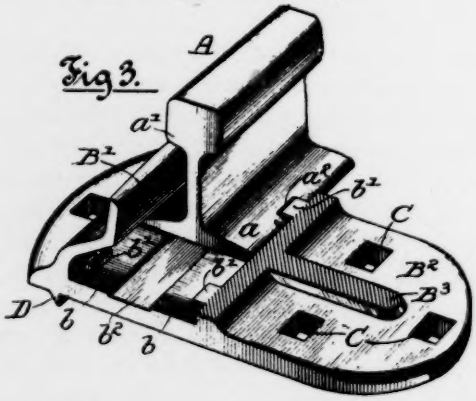
As we have pointed out, this claim 8 of the first Wolhaupter patent in suit, when properly read as defining the tie plate shown and described in the specification of that patent, calls for more or less sharpened devices on the bottom of the plate adapted to *penetrate* and *engage* the tie and therefore running *parallel* to the grain of the tie, and a series of flanges on the top of the plate, which have the function of preventing the buckling of the plate and therefore run across the rail, as described in the Wolhaupter specification. The claim does not properly describe a tie plate such as that of the defendants or of the Goldie patent No. 485,030, in which the bottom across-the-

tie ribs and upper rail-supporting surfaces run parallel with, not across, the rail, and therefore do not perform the functions of the bottom flanges and top flanges of the Wolhaupter plate.

But if claim 8 is to be divorced from the specification of the Wolhaupter patent and improperly construed, as the plaintiff contends, so as to read upon the defendants' tie plate, that construction would surely render it anticipated by the Goldie patent and tie plates of 1892 and therefore invalid.

The Dockstader patent No. 462,399 (Rec. p. 1158), to which reference has already been made (*supra*, p. 22) likewise anticipates claim 8 of the first Wolhaupter patent in suit if it be misconstrued to read upon the defendants' tie plate.

Fig. 3 of Dockstader Patent.



In the Dockstader patent (see Fig. 3), the plate is provided with ribs D on its under side which are shown as more "sharpened" than the ribs on the bottom of the defendants' plate. The Dockstader plate on its top is provided with a rail-abutting shoulder and with rail-supporting

surfaces *b*, *b* having between them a groove b^3. ***These are the structural characteristics of the defendants' tie plate.*** If claim 8 of the first Wolhaupter patent be so broadly construed as to cover the defendants' tie plate, it would likewise cover the Dockstader device and be anticipated and invalid.

It is immaterial that in the Dockstader device there are the additional parts B^1 B^1 B^2 which support the upper part of the rail A. It would require no invention to remove those parts. It is settled by the decisions of this Court that the mere removal of parts of a device without altering the functions of the remaining parts does not amount to invention.

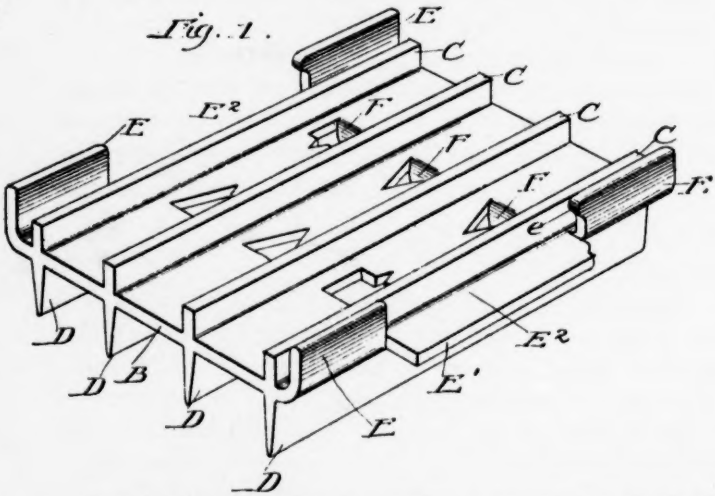
> *Richards* v. *Chase Elevator Co.*, 159 U. S. 477, 486.
> *Stow* v. *Chicago*, 3 Bann. & Ard. 91; Affirmed 104 U. S. 597.
> *Magin* v. *Karle*, 150 U. S. 387.

We therefore submit that the defendants' tie plate is in no respect the tie plate defined by claim 8 of the first Wolhaupter patent in suit. It has no features which correspond to the features of that plate either in construction, mode of operation, or function. The claim cannot be construed to cover the defendants' tie plate without doing violence to the specification and description of the Wolhaupter patent, and without so broadening it as to render it anticipated by the prior art and therefore invalid.

SECOND WOLHAUPTER PATENT IN SUIT, No. 691,332.

The second Wolhaupter patent in suit (Rec. p. 15) describes a tie plate which, except that its flanges are not "stepped", is of the same type as the tie plate of the first Wolhaupter patent in suit, on which it may be regarded as a technical "improvement".

Fig. 1 of Wolhaupter Second Patent in Suit.



This Wolhaupter plate has on its under side flanges D, D directly beneath the upper flanges C, C; both sets of flanges run across the rail and parallel to the length of the tie. The flanges D, D enter the tie parallel to its grain and become embedded therein.

The object and function of arranging the tie-engaging flanges D, D directly beneath the transverse rail-supporting flanges is to increase the resistance of the plate against buckling. The patent states:—

"My invention has for its object the production of

> a tie-plate which while incorporating this feature of flanges on the upper side for sustaining the rail will have the lower side so arranged and disposed that *there is the least liability of the plate buckling.*" (P. 1, lines 20–26.)

Obviously, this arrangement of upper and lower flanges only assists in preventing buckling when *the flanges run across the rail* and parallel with the tie (as is not the case with defendants' plate), because the buckling strain of the rail tends to bend the plate along the edges of the rail bottom. There is no buckling strain of the plate in the direction of the length of the rail because in that direction the entire length of the plate is held down by the rail. The patentee, Wolhaupter, had this very clearly in mind for he further stated in this second patent in suit:—

> "To this end, therefore, the invention primarily consists in the provision on the upper side of a tie-plate of one or more flanges or projections for sustaining the rail and on the under side flanges for *entering the tie parallel with the grain thereof*, the flanges on the lower side being located directly or substantially beneath those on the upper side." (P. 1, lines 27–35.)

The plate is also provided on its upper side with four short flanges E, E, against the ends of which the base of the rail abuts.

The defendants' tie plate has no resemblance to this Wolhaupter plate. It has *no flanges across the rail* nor any rail-supporting flanges either on its top or on its bottom, which prevent buckling. Its three rail-supporting surfaces are all parallel to the rail, and therefore, even if they may be mistermed "flanges", they do not resist the tendency of the plate to buckle. In fact, as already shown (*supra*, p. 49) defendants' plate has no top "flanges".

Its broad rail-bearing surfaces are the real body of the plate, not flanges.

The defendants' plate has no bottom "flanges". It has two shallow V-shaped ribs, which are parallel to the rail and therefore do not resist the buckling strain.

The shoulder of the defendants' tie plate against which the rail abuts is also parallel to the rail and is entirely different in construction from the flanges E, E of the plate of the second Wolhaupter patent in suit, against the ends of which the rail abuts. Defendants' shoulder being parallel to the rail does not resist buckling.

The fact that the defendants' bottom ribs happen to be underneath the two wide side rail-supporting surfaces involves no resemblance between the defendants' plate and that of the second Wolhaupter patent in suit (in which the bottom narrow flanges D are of the same width as and just beneath the narrow top flanges C), because the arrangement in the defendants' plate does not perform the function and therefore is not the same as or an equivalent of the arrangement of the upper and lower flanges of the plate of the Wolhaupter patent in suit.

The defendants' in placing their bottom ribs beneath the broad rail-supporting surfaces have merely followed the Goldie patent No. 485,030 (Rec. p. 1182; *supra,* p. 54), in which the rail-engaging ribs 17, 17 are directly under the rail-supporting surfaces 7, 7, the purpose and result being not to prevent or resist buckling of the plate, but to have the rail bear down directly on top of the ribs to press them into the surface of the tie. The defendants' tie plate has copied none of the features of the tie plate of the second Wolhaupter patent in suit.

THE CLAIMS IN ISSUE OF THE SECOND WOLHAUPTER PATENT IN SUIT ARE NOT INFRINGED.

The three claims in issue of this second Wolhaupter patent in suit are Nos. 1, 2 and 3, as follows: —

> "1. A railway-tie plate provided on its upper side with one or more flanges on which the rail may rest or by which it is directly sustained and on the under side with one or more tie-engaging flanges extending parallel with the upper flanges and directly beneath the latter, substantially as described.
>
> "2. A railway-tie plate provided on its upper side with one or more flanges on which the rail may rest and by which it is directly sustained and on the under side with one or more tie-engaging flanges extending parallel with the upper flanges and directly beneath the latter and sharpened to permit them to readily enter the tie, substantially as described.
>
> "3. A railway-tie plate provided on its upper side with one or more flanges on which the rail may rest and by which it is directly sustained, on the under side with one or more sharpened tie-engaging flanges extending parallel with the upper flanges and directly beneath the latter, and on the upper side with an additional flange or flanges extending above the plane of the rail-sustaining flanges and adapted to receive the lateral thrust of the rail, substantially as described."

These claims define the tie plate described in the specification and shown in the drawings of the Wolhaupter patent, which has upper and lower *flanges of equal width transverse to the rail* and parallel with the tie, arranged as specified in the claims, that is, with the lower flanges, *in their entirety*, directly beneath the upper flanges in order to resist buckling.

As we have pointed out, the defendants' tie plate does not have this construction and is therefore not an infringement of any one of these three claims.

Here again, as in the case of claim 8 of the first Wolhaupter patent (*supra*, p. 43), the organization of the "railway tie plate" described by Wolhaupter necessarily requires that the plate of the claims shall have the characteristic capacities essential to bring about the alleged improvements of this second patent in suit. Any tie plate to be within the claims must therefore have its flanges at right angles to the rail and parallel to the length of the tie. This alone excludes the defendants' tie plate from the claims.

If these claims are read without regard to the tie plate shown and described in this Wolhaupter patent, of which they are by law definitions, they are as fully met by the prior art as they are descriptive of the defendants' tie plate, and therefore such a construction of these claims is impossible.

The Goldie patent No. 485,030 of 1892 (Rec. p. 1182, *supra*, p. 24) shows a tie plate which has, exactly as has the defendants' tie plate, rail-supporting surfaces 7, 7 (improperly called "flanges" by the plaintiff) and lower tie-engaging ribs 17, 17 (which are not "flanges" in the sense of the plaintiff's patents), and *these bottom ribs are directly under and parallel to the rail-supporting surfaces ("flanges") 7, 7 on its upper surface.* It is also provided with a rail-abutting shoulder 9, exactly as in the defendants' tie plate. Hence any construction of the claims in issue of the second Wolhaupter patent in suit, which would read them upon the defendants' tie plate, would render them also anticipated by the Goldie patent and therefore invalid.

The Wells patent No. 203,570 (Rec. p. 1088, *supra*, p. 19) shows a rail-supporting device having rail-supporting surfaces F, C, F, exactly as in the defendants' tie plate.

Figs. 5, 6 and 7 of Third Wolhaupter Patent.

Fig. 5

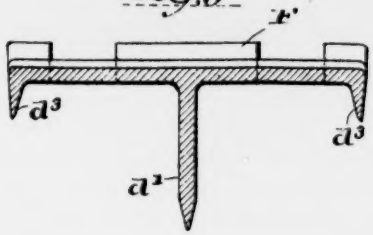


Fig. 6

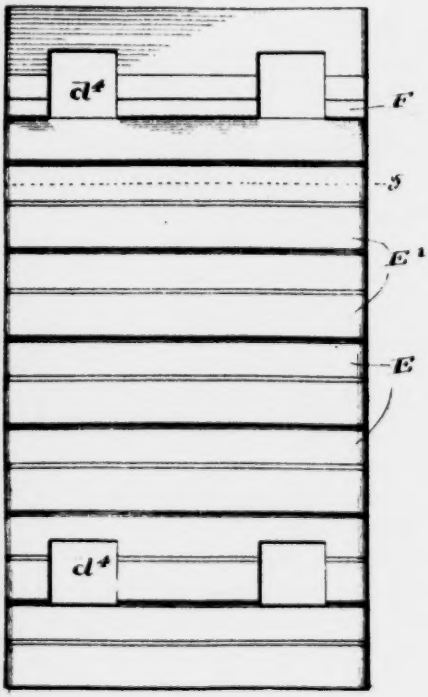
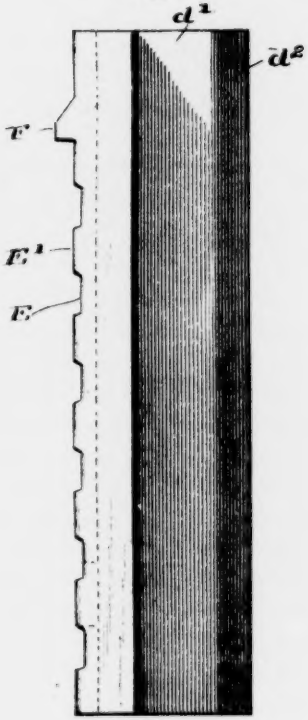


Fig. 7



It has a bottom projection, flange or rib E directly beneath the center upper flange C, and it has a rail-abutting shoulder D on its upper surface. The claims in issue of the Wolhaupter patent in suit read upon the device of the Wells patent as well as they do upon the defendants' tie plate.

We submit that there was no invention whatever in the alleged improvement set forth in this second Wolhaupter patent. At most it was merely locating the under flanges directly beneath the upper flanges of a plate of the Wolhaupter type, that is, where the flanges are real flanges and run crosswise of the rail and parallel to the grain of the tie. Such mere relocation and rearrangement of the flanges in order to resist buckling strain was an obvious mechanical expedient and fully within the capacity of the ordinary mechanic skilled in the art.

THE THIRD WOLHAUPTER PATENT, No. 721,644.

This patent (Rec. p. 18) shows and describes a tie plate made from an old rail. The rail is cut, as shown in Fig. 1, and the base portion and the web are then rolled and cut to form a tie plate. The web B of the rail becomes a very deep central bottom flange d^1. (See Fig. 5.) Side flanges d^2, d^3 are made by turning down the metal on the edges of the plate. These three bottom flanges are driven into the tie *parallel to its grain* and at right angles to the rail as are the bottom flanges of the tie plates of the two prior Wolhaupter patents in suit. The Wolhaupter patents are all of the same type in this respect and radically different from the defendants' tie plate.

The tie plate of the third Wolhaupter patent is then cut across its upper surface to form a series of rail-supporting bearings E^1 and grooves E. These grooves could not be made by rolling, because they are at right angles to the bottom flanges, and to the length of the rail from which the tie plates are made. Only grooves parallel to the

length of that rail could be made by rolling. The top of the plate is also shown as provided with a rail-abutting shoulder F. No explanation is given as to how this rail-abutting shoulder is to be formed above the original upper surface of the old rail.

It would therefore be practically impossible to make this tie plate by rolling from part of an old rail, as described in the patent. There is no pretence that such tie plates have ever been made.

The claims in issue, Nos. 7 and 9, are construed by the plaintiff to cover the trivial modification of making the grooves or channels run *across* the plate, that is, transverse to the tie and parallel to the rail, and to succeed plaintiff must satisfy the court that the claims are to be so construed as to cover any tie plate in which this modification appears. Such a construction would be absurd in view of the prior art. These claims are as follows:—

> "7. A tie plate provided on its rail-supporting surface with transverse grooves or channels, and at one margin of said supporting-surface with a transverse rail-abutting shoulder."
>
> "9. A tie-plate provided in its rail-supporting surface with transverse grooves or channels, reaching to the edge of the plate, and at one margin of said surface a transverse rail-abutting shoulder."

The patent does not state that there is any advantage in making the grooves "transverse" nor is there any.

Even apart from the fact that there could not possibly be invention in forming grooves or channels in the upper surface of the tie plate parallel to the rail, as compared with such grooves or channels parallel to the tie, as shown in the two former Wolhaupter patents in suit, the claims are directly anticipated by the prior Wolhaupter patent No. 691,037 (Rec. p. 1354); the Wells patent No.

203,570 (Rec. p. 1088, *supra*, p. 19); the Goldie patent No. 485,030 (Rec. p. 1182, *supra*, p. 24), and the Dockstader patent No. 462,399 (Rec. p. 1158, *supra*, p. 23).

The *Wolhaupter patent* No. 691,037 (Rec. p. 1354), is a part of the prior art because it was issued January 14, 1902, before the third Wolhaupter patent in suit was applied for, March 31, 1902.

Figs. 11 and 12 of Wolhaupter Patent No. 691,037.

Fig 11

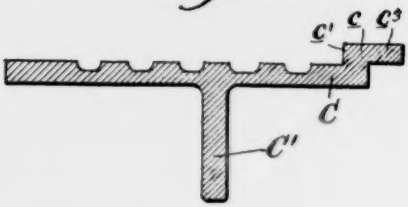


Fig 12

The plate shown in Figs. 11 and 12 of patent No. 691,-037 absolutely anticipates the above quoted claims in issue. The " transverse grooves or channels " in the rail-supporting surface of the plate running across the entire

plate parallel to the rail are clearly shown in those figures and the ribs between them are described at page 2, lines 94–98, of the specification. The "transverse rail-abutting shoulder" is marked c^1, Fig. 11, and is described at page 1, lines 73–78, of the specification.

In the *Wells patent* (Rec. p. 1088, *supra*, p. 19) the rail-supporting device is provided on its upper surface with two grooves B, B parallel to the rail and transverse to the tie, and with a rail-abutting shoulder D, exactly as in the defendants' tie plate, so that any construction of the claims of this third Wolhaupter patent in suit that would fit them upon the defendants' tie plate would be anticipated by the Wells patent (*supra*, p. 19).

The Goldie patent No. 485,030 (Rec. p. 1182, *supra*, p. 24) likewise shows a groove 5 on the upper surface of the plate running parallel to the rail (one groove is obviously the equivalent of two or more) and the rail-abutting shoulder 9 also parallel to the rail (*supra*, p. 24).

The Dockstader patent No. 462,399 (Rec. p. 1158, *supra*, p. 23) also shows a central groove b^2 in the upper surface of the plate and a rail-abutting shoulder, both parallel to the rail (*supra*, p. 23).

We therefore submit that this third Wolhaupter patent in suit is clearly invalid for lack of invention and because anticipated.

COMMERCIAL SUCCESS NOT ATTRIBUTABLE TO ANY OF WOLHAUPTER PATENTS IN SUIT.

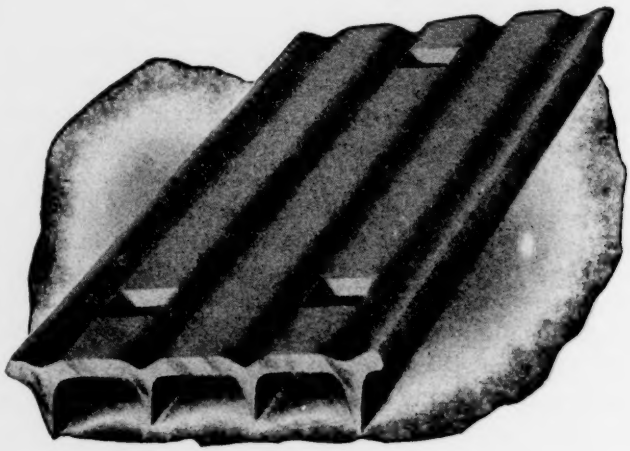
Lack of patentable invention in the Wolhaupter patents in suit is so palpably evident and it is so clear that it is impossible to find such similarities between the several tie plates of those patents and the defendants' tie plate as to justify the charge of infringement, without construing them so as to be met by the tie plates of the prior art, that the plaintiff has been forced to attempt to support its

contentions of validity and infringement by assertions that "Wolhaupter plates" have been a great commercial success. These assertions are not justified. They amount to an attempt to obscure the plain facts of this case by calling every tie plate having a corrugated top a "Wolhaupter plate", regardless of whether those corrugations run parallel to or across the rail, and regardless of whether or not those so-called "Wolhaupter plates" have any of the other features or the alleged advantages of the plates of the Wolhaupter patents in suit. This is misleading.

The record shows that there has never been a tie plate put into commercial use made in accordance with the description and drawings of any one of the Wolhaupter patents. The plaintiff makes no assertion to this effect with reference to the second and third Wolhaupter patents in suit.

The record also shows that Mr. Storey designed the defendants' tie plate without any assistance from Wolhaupter, and that the defendants were the first to introduce and put into use that form of tie plate which the plaintiff later imitated (*supra*, p. 7).

As to the first Wolhaupter patent in suit, the plaintiff claims that it has made and sold a number of plates, the record does not disclose how many, of the types illustrated in the drawings on pages 83 and 84 of the Record and marked "Exhibit No. 24" and "Exhibit No. 25". The plates of these exhibits are substantially identical. To illustrate them, we reproduce No. 24 on the next page. These so-called "Wolhaupter plates" were being put out by the plaintiff in 1898, as were also other forms of plates. (Bell, Rec. p. 82, Q. 12.) Their manufacture ceased many years ago.



"Exhibit No. 24," Illustration Wolhaupter Tie-Plate.
(A comparatively small number made twelve years ago.)

We submit that these plates are not provided with "flanges" on their upper surfaces. The plates are substantially of the same thickness throughout and are not provided with any upstanding ridges or projections that can properly be called "flanges" on which the rail rests. They do not have any short flanges against the ends of which the rail abuts, as in the Wolhaupter first patent in suit. They have no rail-abutting bearing at all. Hence there is nothing to take the thrust of the rail except the necks of the spikes. Their bottom flanges are not "stepped", but are of the same length. These plates are certainly not the plates shown and described in the first Wol-

haupter patent in suit, and it would take an unreasonably liberal interpretation of the claims of that patent to include these plates within them.

The plaintiff's effort to avoid a comparison of the specific plates (Exhibits Nos. 24 and 25, pp. 83, 84 of the Record) with the Wolhaupter patent by calling them "corrugated plates", and then making the assumption that all corrugated plates are Wolhaupter plates, is futile.

It would be much more reasonable for the plaintiff to call all these corrugated plates "Dunham Plates", for its predecessor, the Q. & W. Co., owned the Dunham patent No. 469,386, of 1892. (See assignments, Rec. pp. 884–886.) The Dunham patent (Rec. p. 1169), which is prior to Wolhaupter, shows and describes a truly corrugated tie plate (see our main brief, p. 48), the corrugations running at right angles to the rail and parallel to the tie, as in Wolhaupter's first patent in suit. Plaintiff's witness, Bell, admits that the Dunham plate is of "the corrugated top type". (Rec. p. 143, X-Q. 282.) It is very misleading, therefore, for the plaintiff thus without justification to call all its corrugated tie plates "Wolhaupter Plates" and to pretend or suggest that all such plates embody the inventions of the patents in suit. Any attempt to support these patents on this ground is absolutely without justification.

Even if it be assumed that the plaintiff's plates, like Exhibits Nos. 24 and 25, are within the first Wolhaupter patent, the commercial use of such plates merely shows that they, like a great many other plates such as the Goldie plates (*supra*, p. 24) and Servis plates (Rec. p. 85), could be made and sold commercially when backed by a strong company such as the plaintiff. Moreover, these plates lacked the most vital characteristics of the plate of the first Wolhaupter patent in suit. Their temporary manufacture, therefore, does not afford the basis for plaintiff's argument in favor of the patents in suit. There is

no evidence and no reason to believe that these so-called "Wolhaupter Plates" filled a long felt want, or were in fact a distinct advance in the art.

In addition to the disadvantage of permitting the rail to cut the necks of the spikes because these Wolhaupter plates had no parts against which the rail abutted, they had the disadvantage of severely cutting and injuring the tie because of the long, sharp, deep flanges penetrating the tie parallel to its grain (Faulkner, Rec. p. 208, Q. 87, p. 215, Q. 175, p. 233), and the disadvantage of permitting the plate to move laterally and the rail to spread in use, as above pointed out (*supra*, p. 38, Wallace, Rec. p. 508, Q. 15, p. 272, X-Q. 452, p. 223, Q. 266; Elliott, Rec. p. 251, Q. 73, p. 254, X-Q. 101; Storey, Rec. p. 312, Q. 32; Steinback, Rec. p. 481, Q. 29).

The plaintiff's contention that such plates were less worn by the rail than plates with flat tops because the grooves act as receptacles for sand and grit is not proven. It rests upon the statements of prejudiced witnesses who are seeking to find some advantages in the grooves other than the mere saving of weight, which must be conceded to be their principal advantage.

The plaintiff gives no instance of a flat top tie plate that had become so worn as to be unfit for use. The plaintiff has offered in evidence some tie plates worn by the rail, but it is admitted that these plates were carefully selected to show this wear. (Wolhaupter, Rec. p. 181, X-Q. 141.) The fact is that the abrasion of the rail on the tie plate is practically negligible. (Wallace, Rec. p. 575, X-Q. 149.)

Moreover, the making of grooves in the top of the plate to act as sand receptacles, supposing that the grooves have that function, was not new with Wolhaupter, who was not the first to provide such grooves or ascribe to them that function. This was done by Wells in his patent No. 203,570, and by others before Wolhaupter as above pointed

out (*supra*, p. 18). The truly corrugated plate of the Dunham patent No. 469,386 (Rec. p. 1169) has grooves in its upper surface, which would perform the same function.

The plaintiff, to be sure, has done a large business in tie plates. It claims 70 per cent of the business in this country. Of that 70 per cent it claims that *at the present time* 77 per cent is in tie plates having a "corrugated top". As we have shown, this fact does not prove any merit in the Wolhaupter patents in suit. Moreover, the unreliability of the plaintiff's figures is shown by its admission, that it calls not only defendants' plate, but also the Harriman plate (Exhibit 12, Rec. p. 41) and the Atchison plate of 1905 (Exhibit 13, Rec. p. 42) "Wolhaupter plates". The two latter plates have no flanges of any kind on their bottoms. They have flat bottoms. They therefore are not plates of the patents in suit, all of which have tie penetrating flanges on the bottom. The plaintiff is careful not to specify what kinds of plates it has marketed. It makes no specific statements. Its general assertions are unreliable. In any event they show no merit in the plates of the Wolhaupter patents in suit.

It is therefore evident, we submit, that the Wolhaupter patents cannot be supported by any theory that they have taken the market, or that they are for the last step that wins, or that Wolhaupter succeeded where others failed, or that they are the only plates that are satisfactory commercial plates. The fact is that the Wolhaupter patents show and describe forms of tie plates which have not proved commercially valuable, and which have not been generally adopted. There is no pretence that any tie plates like those of the second and third Wolhaupter patents have ever been made.

Under these circumstances there is no reason to attribute any invention to Wolhaupter in the design of the plates of these patents, and there is no reason why this

Court should give them an expanded construction which is entirely unjustified by their specifications and claims, which, in order to cover the defendants' tie plate, it would be necessary to stretch to the point of rendering them anticipated by the prior art.

This case presents at most three specific inventions in a crowded art in which each patentee, if he be entitled to anything at all, is entitled to a patent for his specific improvement. It cannot be pretended that the defendants' tie plate is that described in any one of the three Wolhaupter patents in suit, or is a colorable imitation of any one of them.

AUTHORITIES THAT THE WOLHAUPTER PATENTS IN SUIT BEING FOR SPECIFIC IMPROVEMENTS CANNOT BE BROADLY CONSTRUED.

In *Computing Scale Company* v. *Automatic Scale Company,* 204 U.S. 609, the Supreme Court said (p. 621):—

> "Conceding that this spiral rod and its connections with the cylinder in the manner and for the purposes stated is a novel feature in the combination and entitled to protection, it is of that narrow character of invention which does not entitle the patentee to any considerable range of equivalents, but must be practically limited to the means shown by the inventor. The distinction between pioneer inventions permitting a wide range of equivalents and those inventions of a narrow character, which are limited to the construction shown, has been frequently emphasized in the decisions of this Court."

In *Boyd* v. *Janesville Hay Tool Company,* 158 U.S. 260, the court said (p. 261):—

> "It clearly appears that Boyd was not a pioneer in this department of machinery. Many inventors had

preceded him, and many patents had been issued for improvements in hay carriers in form and purpose similar to those described in Boyd's specification. We think the case is one where, in view of the state of the art, the patentee is only entitled, at the most, to the precise devices mentioned in the claims."

In *Blake* v. *San Francisco*, 113 U. S. 679, the Supreme Court said (p. 681): —

> "The evidence shows that Bailey was not the first to conceive the idea of a device for opening or closing rigidly an automatic valve. The same thing had been done by means of wedges and screws and other devices. *He cannot, therefore, cover by his patent all the devices for producing this result, no matter what their form or mode of operation. The claim must be confined to the specific device described in the specification and claim*, namely, a pin-hole and pin. If this construction of the claim be adopted, it is clear that no infringement is shown".

To the same effect are: —

Railway Co. v. *Sayles*, 97 U. S. 554, 556;
Bragg v. *Fitch*, 121 U. S. 478, 483;
Kokomo Fence Machine Co. v. *Kitselman*, 189 U. S. 8, 18;
Kenny Mfg. Co. v. *J. L. Mott Iron Works*, 137 Fed. Rep. 431, 434 (Coxe, J.);
National Hollow B. B. Co. v. *Interchangeable B. B. Co.*, 106 Fed. Rep. 693, 710 (C. C. A. 8th Cir.);
Roemer v. *Peddie*, 78 Fed. Rep. 117, 118 (C. C. A. 3d Cir.);
Lamson Cash Ry. Co. v. *Godehard*, 59 Fed. Rep. 776, 780 (C. C. A. 8th Cir.).

We therefore insist that when the claims in issue of the Wolhaupter patents in suit are read, as they should be, as descriptive of the plates shown and described in the specifications of those patents, they are not infringed by the defendants' tie plate.

OPINION OF THE COURT OF APPEALS FOR THE SEVENTH CIRCUIT.

The Opinion of the Court of Appeals for the Seventh Circuit holding valid and infringed the three Wolhaupter patents in suit is printed at p. 119 of our main brief and at p. 1408 of the Record.

We submit that the Court of the Seventh Circuit erred fundamentally in failing to apply to the Wolhaupter patents and their relations to the tie plates of the prior art and to the defendants' alleged infringing tie plate the definite and well settled principles of Patent Law, which this Court has established in its decisions dealing with the questions of validity, construction and infringement of Letters Patent.

It is fundamental that the essence of a patented invention is to be looked for and found in the *thing*, whether it be a machine, an article or a process, which is described in the specification of a patent, and that the claims are but the definitions of that alleged invention. They must be read in view of the thing that was new, and no mere phraseology can expand their scope beyond that which was in fact the real invention, if any, disclosed in the patent. This principle is completely neglected by the Court of Appeals for the Seventh Circuit, which treats the claims in issue of the Wolhaupter patents in suit as utterly disassociated from the inventions, if any, and even from the devices shown and described in those patents.

It overlooks the vital distinctions between the defendants' tie plate and the tie plates of the patents in suit and

ignores the requirements in the several specifications and the limitations, which we respectfully submit, must be imposed on the claims.

Another fundamental principle which that court overlooked is that a patent must be construed with reference to those devices which were known and used or patented or disclosed in printed publications prior to the date of the alleged invention, and that when so construed the patent and its claims should be compared with the defendants' structure to ascertain whether the invention, *which was actually made by the patentee,* has been taken by the defendant.

The Court of Appeals for the Seventh Circuit first considers claim 8 of the first Wolhaupter patent in suit, and takes as its text the finding of the Court of Appeals for the Sixth Circuit in the Elyria case that —

> "Wolhaupter endeavored to cover a field of invention far wider than he was entitled to occupy, and the claim must be held void, because it is broader than the real invention." (Opinion of the Court of Appeals for the Sixth Circuit; our main brief, p. 116.)

The Court then eliminates, as having no bearing whatever on the construction of claim 8, the fact that the Wolhaupter plate described in the patent has "stepped" bottom flanges and therefore the capacity of being reset after once the plate and rail have been moved lengthwise on the tie. The Court ignores the fact that this capacity of the Wolhaupter plate can be present *only in a plate having bottom flanges which are parallel to the tie.* In so doing the Court disregards the structure of the plate of the first Wolhaupter patent in suit, which must be taken into account as the *only structure to which the patent relates,* inasmuch as it is the only one to which the alleged improvements are applicable.

The Court, after quoting from the patent, refers to the alleged advantages —

> " in having a series of flanges on the upper side of the plate for the rail to rest upon ". (Our main brief, p. 125),

and states: —

> " These advantages are manifestly independent of of the character of the tie-engaging flanges on the under side of the plate." (Our main brief, p. 126.)

The Court then proceeds to draw the conclusion that claim 8 does not define the particular character of the flanges on the bottom of the plate and their relations to the structure and to the requirements of the patent, but is satisfied by —

> " devices of any sort adapted to penetrate and engage the tie ". (Our main brief, p. 126.)

The Court, while pointing out the fact that the advantages of the top flanges are independent of the character of the bottom flanges, ignores the inevitable conclusion that therefore the top and bottom flanges are each separate and independent features, which have no mutual co-operation in the tie plate but are merely old devices " aggregated ", and that for such an aggregation no valid patent can be taken. (See *supra,* p. 30.)

The cases of —

> *Oshkosh Grass Matting Co.* v. *Waile Grass Carpet Co.,* 207 Fed. Rep. 937 and
> *Krell Auto Grand Piano Co.* v. *Story & Clark Co.,* 207 Fed. Rep. 947

are cited by the Court as supporting its contention that the collocation of Wolhaupter's upper and lower flanges is a patentable combination and not a mere unpatentable

aggregation. Those cases, however, are plainly to be distinguished, for in those cases the patents were for machines which had co-operative or successively-acting mechanisms, which were in each case combined to produce a single new and useful result.

In the Wolhaupter tie plate, on the contrary, the top and bottom flanges are absolutely independent features, both taken from the prior art, which do not modify each other's action or perform any new function in relation to one another in that plate. They are therefore an "aggregation" of features, exactly of the kind that was held not to be patentable in the case of *Hailes* v. *Van Wormer* fully discussed by us (*supra*, p. 31).

The Court of Appeals for the Seventh Circuit before discussing the art prior to Wolhaupter makes a most fundamental error in its statement that:—

> "The utility of the invention is abundantly demonstrated by the instant and growing demand, amounting at the beginning of this suit to over 40,000,000 plates a year, and is further shown by appellees' move to share in this commercial success in the face of the certainty of vigorous and expensive litigation." (Our main brief, p. 128.)

This statement shows a serious misconception of the actual facts set forth in the record. As we show above (p. 67) no tie plate of the form shown in the first Wolhaupter patent in suit was ever placed upon the market, and the only plates having the least resemblance to it (and that resemblance was by no means close) were tried for a few years and then abandoned because of their deficiencies and destructive action upon the tie. It is not contended that any plates of the second and third Wolhaupter patents were ever marketed. The present

demand for tie plates is not for those of the Wolhaupter patents in any sense.

As to the specific form of the defendants' tie plate here in controversy, it is the admitted and undisputed fact that the defendants were the first to make and sell this form of plate and that in its commercial use the plaintiff copied the defendants and not the defendants the plaintiff.

The Court in the statement last above quoted is not logical, for it first assumes that the defendants' plate, copied by the plaintiff, is that of Wolhaupter, and then argues that its commercial use shows invention by Wolhaupter. This assumption puts the cart before the horse by assuming at the very beginning of the inquiry that the defendants' plate is an infringement of the plaintiff's patents in suit.

This assumption ignores the fundamental and significant differences between the plates of the Wolhaupter patents in suit and the defendants' alleged infringing plate which, in view of the prior art, absolutely negative infringement.

The Court also is inconsistent in its discussion of the prior art. After having stated that the character of tie-penetrating and engaging devices was immaterial, it proceeds to distinguish the prior patents to Hudson, No. 142,020, to Wells, No. 203,570, and to Dunham, No. 489,386, mainly on the ground that the character of their tie-penetrating and engaging devices is not that of the first Wolhaupter patent in suit.

The Court's attempt to distinguish between a rail chair and a tie plate (our main brief, p. 130) is most elusive and unsubstantial. The attempted distinction that rail chairs are " bolted or otherwise permanently and securely affixed to the rail ", and therefore " they belong with the rail ", while a tie plate is held by spikes " whose heads clamp over the flange of the T-rail ", and therefore " they belong with the tie " is specious and in any event does not apply to the rail chair of the Wells patent because, as shown in

that patent (*supra*, p. 19), the spikes hold against the top of the rail flange, and have the same mode of operation in attaching the rail and plate to the tie as do the ordinary spikes used with tie plates which grip the rail and not the plate.

The Court was certainly in error in its assertion that "the law of the rail chair structure" was such that the supposed grinding of the rail on the plate, due to the presence of sand between the two, was not a condition that had to be met by engineers in the rail chair art (our main brief, p. 130). On the contrary, as we have pointed out (*supra*, p. 19), the Wells patent specifically states that the two grooves B, B, in the upper surface of the rail chair are to "serve as receptacles for sand or grit that may enter between the chair and the rail" (Wells patent, p. 1), which is precisely the function attributed to the grooves in the upper surface of the plate of the first Wolhaupter patent and concerning which practically inconsequential function the plaintiff makes so much talk in this case.

The Court in its consideration of the Goldie patent No. 485,030 *supra*, p. 24, (our main brief, p. 134), neglects the fact that Goldie plates went into substantial commercial use before Wolhaupter and were used with rails having flat bottoms, so that there was in actual practice a substantial channel beneath the rail and between the rail-supporting surfaces of the plate, which channel actually served to the same extent as did the grooves of the Wolhaupter plates to free those rail-bearing surfaces of sand and thus prolong the life of the plate. (See *supra*, p. 56.)

Of the Goldie plate the Court states: —

> "The manufacture of this plate, as the patentee thereof himself testified, was abandoned, and its use was entirely superseded by the Wolhaupter plate." (Our main brief, p. 134.)

It is impossible, we submit, to draw such conclusions from the facts set forth in the record. These facts are that the specific form of Goldie plate shown in the patent was successfully used, whereas no use was ever made of the plate shown and described in the first or in any of the Wolhaupter patents in suit. If the commercial use of the defendants' alleged infringing plate (introduced into use by the defendants) has any bearing upon this statement, it is clear that the statement is incorrect because that plate embodies the features of the Goldie plate, viz: the rail abutting shoulder, the upper groove and rail-bearing surfaces and the bottom ribs, all parallel to the rail and across the tie, and it does not contain a single specific feature taken from the Wolhaupter plate.

The Court plainly was misled by the plaintiff's argument as to the Wilson patent, No. 522,867, for of this patent it said: —

> "when the whole plate is put together as Wilson instructed it to be, the rail rests upon a flat plate of uniform thickness throughout." (Our main brief, p. 135.)

This is an error, as a glance at the Wilson patent (Rec. p. 1229, *supra*, p. 25) will show. Figs. 1 and 2 of that patent show the plate as it is in actual use. Fig. 1 shows five flanges a^1 on which the rail rests. These flanges are transverse to the rail. Between them are four channels or grooves. In two of these channels is a special spike device, the top of which is shown in Fig. 2 *below the bottom of the rail.* In each of the remaining two grooves is an ordinary spike. Clearly the grooves offer fully as much opportunity for the removal of sand and grit from the tops of the flanges as do the top grooves in the plate of the first Wolhaupter patent in suit. In Wilson each flange a^1 is adjacent to a groove in the plate or is at the edge of the

plate itself, thereby giving free opportunity for the escape of sand and grit. The Wilson patent, as pointed out (*supra*, p. 53), absolutely anticipates any construction of claim 8 of the first Wolhaupter patent in suit which would read it upon the defendants' tie plate.

The truly *corrugated-top* plate of the Dunham patent No. 469,386, the Court seems to have dismissed on the ground that in a figure representing a modification Dunham shows a plate with a flat top. But this does not lessen the significance of Fig. 1, which shows a plate with a corrugated top. It cannot be questioned that the bottom corrugations would penetrate and engage the tie to some extent under the pressure of the rail, and that the corrugations would not flatten out if the plate were made of suitable strength. The only difference between the Wolhaupter and Dunham plates is that stated by Judge Kohlsaat in his Opinion in the Hart case. (Our Main brief, p. 93):

> "The device of claim 8 differs from the device of the Dunham patent only in its under flanges being more or less sharpened". (Our Main brief, p. 99.)

We therefore submit that the Court of Appeals for the Seventh Circuit was wrong in its finding that "never prior to Wolhaupter had the tie plate of claim 8 been produced", if that claim be so misconstrued as to broaden it to cover the defendants' alleged infringing tie plate.

We also deny that Court's statement that —

> "since then the entire development has been along the line of improving the tie plate of claim 8".

On the contrary, the fact is that the so-called Wolhaupter plates were tried and abandoned and the art was developed on the lines of a flat plate provided with suitable rail-engaging and tie-engaging features, all parallel to

the rail, which were old before Wolhaupter and which are the antitheses of the features of the Wolhaupter plate in function, mode of operation and structure.

As an illustration of how far the Court of Appeals for the Seventh Circuit wandered from the actual facts, we quote its statement as to the second Wolhaupter patent in suit:

> "The prompt acceptance of this idea, the commercial success to which this idea has contributed, and the fact that seven years elapsed after Wolhaupter had disclosed the general combination before any of the numerous engineers interested in railroad construction perceived the possibilities of such a relationship, lead us to resolve any doubt that might be created by the apparent simplicity of the step, in favor of the validity of the patent." (Our Main brief, p. 139.)

It is enough to say that it is the admitted fact that no plate like that of the second Wolhaupter patent in suit was ever made or used.

As to the third Wolhaupter patent in suit, the court made no attempt whatever to consider the prior art with relation thereto. As we have shown (*supra*, p. 66), the claims in issue are absolutely anticipated.

The Court's discussion of the question of infringement is very meagre. Of this question it says:—

> "So respecting infringement the question is whether these claims read upon the structure put forth by the appellees." (Our Main brief, p. 140.)

This, we submit, is clearly an error. This Court in its many decisions referred to and applied in *Westinghouse* v. *Boyden Power Brake Co.*, 170 U. S. 537,568, has pointed out that infringement does not necessarily follow because the language of the claim as a matter of words can be read

upon a defendant's structure, but that substantial likeness in character and mode of operation are essential to infringement. Such considerations the Court of Appeals for the Seventh Circuit absolutely ignored. We submit that they show conclusively that the defendants' plate is not an infringement of any of the patents in suit.

The Court of Appeals for the Seventh Circuit advances as its final argument as to the defendants' tie plate: —

> "As this tie plate is substantially a copy of appellant's commercial structure, the real inquiry is whether appellant has abandoned its own inventions." (Our Main brief, p. 140.)

It is necessary only to remind this Court that the defendants made and sold the specific form of the tie plate referred to before the plaintiff made and sold them. The plaintiff copied the defendants and under such circumstances it would not be extraordinary if it did abandon its own inventions. Moreover, it owns a number of patents on tie plates in addition to those in suit. By a parity of reasoning it has "abandoned" the inventions of those patents, inasmuch as the plaintiff does not claim that they are embodied in the form of tie plate marketed by it in imitation of the defendants' tie plate. If it abandoned the inventions of these patents, why should it not have abandoned the inventions of the patents in suit?

CONCLUSION.

There can be no reasonable contention made by the plaintiff that the defendants' plate copies in any respects the features of the plates of the Wolhaupter patents in suit. We submit that the fundamental similarities between the defendants' plate and those of the prior art and the striking differences between the defendants' plate and the

plates of the Wolhaupter patents in suit cannot be ignored. They necessarily lead to the conclusion that the defendants' plate is not an infringement of those patents, even if they are valid, which we deny.

We respectfully submit that the reasoning and conclusion of the Court of Appeals for the Sixth Circuit (our Main brief, p. 105), following the views of Judge Kohlsaat (our Main brief, p. 93) and Judge Day (our Main brief, p. 103) rather than those of the Court of Appeals for the Seventh Circuit, will find favor with this Court and that, in both cases, there should be ordered a decree dismissing the bill with costs.

FREDERICK P. FISH,
of Counsel for Defendants.

substantially the same means, with better results, is not such invention as will sustain a patent.

Patents claiming merely improvements in devices already well exploited in the prior art must be limited strictly to the forms described in the claims.

213 Fed. Rep. 789, affirmed.

THE case is stated in the opinion.

Mr. Taylor E. Brown, with whom *Mr. Clarence E. Mehlhope* was on the brief, for petitioner.

Mr. Frederick P. Fish and *Mr. Frank F. Reed*, with whom *Mr. Edward S. Rogers* was on the briefs, for respondent.

MR. JUSTICE CLARKE delivered the opinion of the court.

On March 26, 1909, The Railroad Supply Company, petitioner, commenced this suit against The Elyria Iron & Steel Company in the Circuit (now District) Court for the Northern District of Ohio, claiming infringement of claim No. 8 of United States Letters Patent No. 538,809, granted May 7, 1895, of claims Nos. 1, 2 and 3 of Patent No. 691,332, granted January 14, 1902, and of claims Nos. 7 and 9 of Patent No. 721,644, granted February 24, 1903. All of these patents, granted to B. Wolhaupter, were acquired by the petitioner, and each of the three purported to describe a new and useful improvement in railroad tie-plates.

Such proceedings were had in the case that on March 4, 1912, the District Court decided that the petitioner's patents were not infringed by the device manufactured and sold by the defendant.

On appeal to the Circuit Court of Appeals for the Sixth Circuit, that court on April 7, 1914, affirmed the decree of the District Court dismissing the bill, and held in its

opinion that the claims of the patents relied upon were void for want of patentable novelty. This decree is now here for review on certiorari.

A railroad tie-plate, sometimes called a "wear plate," is a rectangular piece of metal, originally with both surfaces flat, designed to be placed upon the tie immediately under the rail, for the purpose of protecting the tie from the wear, which in soft wood is very great, incident to the vibration of the rail caused by passing engines and trains and for the purpose of holding the rail more firmly in place than it could otherwise be held by the spikes without the plate, thereby preserving the gauge of the track.

In the early days of railroading when engines and cars were small and light, when speed was comparatively slow and when hardwood, which held the spikes firmly in place, was abundant and cheap, such plates were little used; but the increase in weight of rails and rolling stock, the higher speed of trains and the necessary use of the cheaper soft woods for ties have brought them into extensive use. The general use of these plates with heavy rolling stock and traffic presented the problem of making them as strong and inexpensive as possible and in a form such that they would adhere firmly to the ties while doing the least possible damage to the fibre of the wood.

The statement of this problem shows convincingly that even at the beginning it offered a very limited field for invention, if, indeed, it presented any field at all for the exercise of that inventive genius which it is the policy of the law to protect and reward with a monopoly for seventeen years.

The claims of the patents declared on are as follows: Claim 8 of Patent No. 538,809 reads:

"A railway-tie plate formed on the under side with devices more or less sharpened adapted to penetrate and engage the tie, and on its upper side with a series of flanges on which the rail rests, substantially as described."

It would be difficult to write in more general terms a description of any plate, whether channeled, corrugated, grooved or ribbed on both sides.

Claims Nos. 1 and 2 of Patent No. 691,332, differ so slightly that No. 1 will suffice:

"A railway-tie plate provided on its upper side with one or more flanges on which the rail may rest or by which it is directly sustained and on the under side with one or more tie-engaging flanges extending parallel with the upper flanges and directly beneath the latter, substantially as described."

Claims 7 and 9 of Patent No. 721,644 are so similar that only No. 7 need be quoted:

"A tie-plate provided in its rail-supporting surface with transverse grooves or channels, and at one margin of said supporting surface with a transverse rail-abutting shoulder."

Wolhaupter the grantee of the three patents was a civil engineer employed by a railroad company and he testifies that he first turned his attention to tie-plates for the purpose of improving them "in the year 1893 or early in 1894" and the earliest of his three patents in suit is dated May 7, 1895.

The earliest patent for a "wear" or tie-plate by that specific name, which is shown by this record, was issued in 1881 and between that date and the date of the issuing of the first patent in suit to Wolhaupter in 1895 twenty-six patents were issued, and in the seven years between 1895 and 1902, when Wolhaupter's second patent in suit was issued, nineteen more patents were issued for various forms of this simple device.

Thus it is seen that Wolhaupter came late into this narrow, and even then much exhausted, field of investigation and in his first patent (not here in suit), dated December 11, 1894, he claims invention for placing one, or permissibly two, "elongated divided ridges" on the under

side of such a plate to engage the tie and on the upper side a series of ridges parallel with those on the lower side, but adapted after being rolled to being cut away to form a seat for the rail. There is no claim as to the relative positions of the ridges on the two faces of the plate.

In his second patent (the first in suit), his claim of invention is for "one or more" flanges "more or less sharpened" (not divided now) on the under side of the plate to engage the tie, and on the upper side a series of flanges (ridges) on which the rail may rest. The flanges (ridges) on the upper surface must not be placed vertically above the flanges or ridges on the lower and there is no provision for cutting them away for a rail seat as in the first patent. The dominating thought of this patent is the cutting of the plate "on a diagonal line with respect to the rail flange," but as this form of plate is not claimed by the patentee in his later patents, and as no merit is claimed for it in the testimony in the record, it will be neglected.

In his third patent Wolhaupter's inventive genius placed the flanges on the under side parallel with and directly beneath those on the upper side of the plate, instead of between them as in the second patent, or regardless of either position as in the first.

In his fourth patent the flanges on the lower side are given a position "transverse" to the ridges on the upper side.

In the first three of petitioner's patents the flanges on both surfaces of the plate are for use parallel to the grain of the tie and transverse to the length of the rail. In the fourth patent the flanges on the under side are described in the specifications and drawings as transverse to, but in claim four as parallel to, the grain of the tie.

The minute and obviously wholly tentative variations, thus described, in the plates in the Wolhaupter patents, are fairly illustrative of the slight differences in form given to this simple device on which this record shows forty-

five separate patents were granted during the twenty-two years between 1881 and 1903.

This discussion of the record and reference to the respondent's patents brings us to the question, Do the claims of these patents describe an "invention or discovery" or "a new and useful . . . manufacture . . . or improvement thereof," such as our patent laws were designed to protect?

We have seen that long before Wolhaupter's patents tie-plates were used for the purposes for which his plates were designed. It was certainly obvious that if wedge shaped flanges, or ribs or claws, or other downward projections, were placed on the under side of such plates they would penetrate the ties when weight was put upon them and thus assist in holding the rail in place.

Very certainly it was also general knowledge before 1895 that if one wished to reduce the weight of a plate without loss of strength this could be done by using channel iron, angle iron or corrugated iron, or, which comes to the same thing, by having the plate made with flanges or ribs (*Servis Railroad Tie Plate Co.* v. *Hamilton Steel & Iron Co.*, 8 Can. Exch. Rep. 381), and the placing of flanges on the upper side of such plates to engage the outer flange of the bottom of the rail, and thus to receive the lateral thrust caused by the flanges of the wheels tending to spread the rails, was also obvious and well known before Wolhaupter's patents.

To the obviousness of the elements necessary to the solution of this problem must be added the state of the art, if such it may be called, when Wolhaupter, late in 1893 or early in 1894, began, as he says, the investigation of tie-plates and "familiarized himself with the literature of the subject." He testifies that he had seen the tie-plates of Servis (patented 1881, No. 249,407; 1884, No. 294,816) and of Goldie (patented 1887, No. 356,760; 1890, No. 426,530; 1891, No. 457,584; 1891, No. 457,585, and

1892, No. 485,030) and he is presumed by the law to have had all prior patents before him when he applied for his patent. *Duer* v. *Corbin Cabinet Lock Co.*, 149 U. S. 216, 223; *Mast, Foos & Co.* v. *Stover Mfg. Co.*, 177 U. S. 485, 493.

In the plates of Servis, Wolhaupter saw a plate with "a flange or flanges formed on the lower side" to engage the tie lengthwise of the grain of the wood and, of course, transverse to the rail, and in the Goldie patents he saw in No. 457,584 "a triangular tooth like projection" extending downward from the bottom of the plate and a raised shoulder on the upper side to receive the lateral thrust of the edge of the rail flange, and in patent No. 485,030 he saw a plate with two downward projecting ribs to engage the tie, with a shoulder on the upper side to receive the thrust of the rail, and with a "transverse depression" in the upper surface, and bearings or flanges on each side of this depression to receive and support the base of the rail.

We thus have Wolhaupter confessing that before he applied for a patent he had knowledge of tie-plates with "ridges," "flanges" and "teeth" projecting downward from the under side of them to engage the tie, differing at most only in form, and in this but slightly, from the similar downward projecting flanges "more or less sharpened" which appear in all three of his patents in suit; that he had knowledge of plates with a shoulder on the upper surface to receive the thrust of the side of the bottom of the rail, not differing from the "rail abutting shoulder" shown in all three of his patents, and that he also had knowledge of the latest Goldie patented plate, with the upper surface "channeled" by having a depression extending across the plate under the central portion of the bottom of the rail and with a bearing on each side of it to support the rail.

It is thus made very clear that the only appearance

even of novelty or of invention in the Wolhaupter plates is in their having flanges on the upper surface, on which it is intended the rail shall rest, for downward extending flanges on the under side and the rail abutting shoulder on the upper side are found in earlier patents in almost precisely the form which he gave to them. But such flanges on the upper surface of the Wolhaupter plate cannot constitute of themselves patentable invention or novelty, for it is very clear, as we have already said, that a resort to channels, grooves and corrugations was a familiar method of reducing the weight and thereby the cost of iron plates without decreasing their strength, long before the Wolhaupter patents, and this form was, therefore, one to which any skilful mechanic would turn to accomplish the purpose that Wolhaupter claimed for it, and that others did so resort to this form is sufficiently shown by reference to the Wells patent, No. 203,570 (1878), the Wilson patent, No. 522,867 (1894) and the Dunham patent, No. 469,386 (1892).

With these facts before him the most that can be said for the patents in suit is that they gave a somewhat different form to three features which were perfectly familiar and were similarly grouped in prior forms of tie-plates but without giving to any of them any new function and without accomplishing by them any new result. This brings the patents within the principle so often declared that "a mere carrying forward of the original thought, a change only in form, proportions, or degree, doing the same thing in the same way, by substantially the same means, with better results, is not such an invention as will sustain a patent." *Roberts* v. *Ryer*, 91 U. S. 150; *Belding Mfg. Co.* v. *Challenge Corn Planter Co.*, 152 U. S. 100; *Market Street Cable Ry. Co.* v. *Rowley*, 155 U. S. 621, 629.

The device involved in these patents is so simple and familiar in all of its forms that a description of it seems

sufficient to visualize it to the reader, but cuts of it in various forms may be found in the reported decisions of this case, *Railroad Supply Co.* v. *Elyria Iron & Steel Co.*, 213 Fed. Rep. 789, and in the report of the case, involving the same claims of the same patents, in the Seventh Circuit, to be found in *Railroad Supply Co.* v. *Hart Steel Co.*, 193 Fed. Rep. 418 and 222 Fed. Rep. 261.

Clearly persuaded as we are that the slight variations claimed for the patents in suit from the plates which had gone before do not constitute patentable invention we cannot consent to further extend this discussion by a minute comparison of them with earlier patents appearing in the record, but we content ourselves with adopting as comment not to be improved upon in such a case as we have here the following from a former decision of this court:

"The design of the patent laws is to reward those who make some substantial discovery or invention, which adds to our knowledge and makes a step in advance in the useful arts. Such inventors are worthy of all favor. It was never the object of those laws to grant a monopoly for every trifling device, every shadow of a shade of an idea, which would naturally and spontaneously occur to any skilled mechanic or operator in the ordinary progress of manufactures. Such an indiscriminate creation of exclusive privileges tends rather to obstruct than to stimulate invention. It creates a class of speculative schemers who make it their business to watch the advancing wave of improvement, and gather its foam in the form of patented monopolies, which enable them to lay a heavy tax upon the industry of the country, without contributing anything to the real advancement of the arts. It embarrasses the honest pursuit of business with fears and apprehensions of concealed liens and unknown liabilities to lawsuits and vexatious accountings for profits made in good faith." *Atlantic Works* v. *Brady*, 107 U. S. 192, 200.

We add that each of the patents of the petitioner being in terms for an "improvement in tie-plates," the state of the "prior art" as described in this opinion requires that they be limited strictly to the form described in the claims, and therefore the patents in suit, even if they had proved valid, would not have been infringed by the plates manufactured by the defendant.

The decree of the Circuit Court of Appeals is

Affirmed.

MR. JUSTICE DAY did not take any part in the decision of this case.